



REPUBLIC OF KENYA

MINISTRY OF FOREIGN AND DIASPORA AFFAIRS

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA, ETHIOPIA

TENDER DOCUMENTS

W.P ITEM NO. D105 AF/ETH/2101 JOB NO. 10976A

PROJECT MANAGER

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INTERIOR DESIGNER

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MAY, 2024

TABLE OF CONTENTS

<u>Item</u>	<u>Page No.</u>
1. CONTENTS PAGE	1
2. SIGNATURE AND SPECIAL NOTES PAGE	2
3. INVITATION TO TENDERERS	3
<u>SECTION ONE – TENDERING PROCEDURES</u>	
4. INSTRUCTIONS TO TENDERERS	5-12
5. TENDER DATA SHEET	13
<u>SECTION TWO – TENDER EVALUATION CRITERIA</u>	
6. EVALUATION AND QUALIFICATION PROCEDURES	15
7. TENDERING FORMS	17-18
<u>SECTION THREE – CONDITION OF CONTRACTS AND CONTRACT FORMS</u>	
8. GENERAL CONDITIONS OF CONTRACTS	20–83
9. SPECIAL CONDITIONS OF CONTRACTS	84-86
10. CONTRACTS FORMS	87-93
<u>SECTION FOUR – BILLS QUANTITIES</u>	
11. PREAMBLES AND PRICING NOTES	95–96
12. ABBREVIATIONS	97
13. PRELIMINARIES	P/1
14. CHANCERY	AAE/CH/1-AAE/CH/17
15. OUT DOOR KITCHEN	AAE/K/1-AAE/K/15
16. AMBASSADOR’S RESIDENCE	AAE/AR/1-AAE/AR/10
17. STAFF RESIDENCES	AAE/SR/1-AAE/SR/4
18. CIVIL WORKS	CIV/1-CIV/5
19. ELECTRICAL INSTALLATION WORKS	ELEC- 31 - 43
20. STRUCTURED CABLING, CCTV & ACCESS CONTROL INSTALLATION WORKS	STRUCT 1-8
21. PROVISIONAL SUMS	PS/1
17. GRAND SUMMARY	GS/1

Prepared and Issued by: -

Quantities and Contracts Department,
State Department for Public Works,
P.O Box 30743-00100
NAIROBI, KENYA

The contract for the above-mentioned works entered into this day of 2024 by the undersigned refers to these Bills of Quantities and the Ministry of Works General Specification dated March, 1976 (together with any amendments issued thereto) shall be read and construed as part of the said contract.

.....
CONTRACTOR

.....
Ambassador,
Embassy of the Republic of Kenya,
ADDIS ABABA, ETHIOPIA

Date.....

Date.....

SPECIAL NOTES

- 1) The Contractor is required to check the numbers of the pages of these Bills of Quantities and should he find any missing or in duplicate or figures indistinct he must inform the High Commissioner at once and have the same rectified.
- 2) No liability will be admitted nor claim allowed in respect of errors in the Contractor's Tender due to mistakes in the Specifications which should have been rectified in the manner described above.

SIGNATURE PAGE AND NOTES

INVITATION TO TENDER

PROCURING ENTITY: Embassy of the Republic of Kenya. Addis Ababa Ethiopia.

CONTRACT NAME AND DESCRIPTION: **PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA – ETHIOPIA.**

1. The **Embassy of the Republic of Kenya** invites sealed tenders for the construction of **PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA – ETHIOPIA.**
2. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours (8.00AM- 1.00PM and 2.00PM - 5.00PM local time) at the Embassy of the Republic of Kenya Addis Ababa, Ethiopia.
3. Tenders shall be quoted in US Dollars and shall include all taxes. Tenders shall remain valid for **140 days** from the date of opening of tenders.
4. All Tenders must be accompanied by a **Tender Security** equivalent to 1% of the tender sum.
5. The Tenderer shall chronologically serialize all pages of the tender documents submitted.
6. Completed tenders must be delivered to the address below on or before the date and time indicated in the tender advertisement notice.
7. Pretender Site visit shall be as indicated in the **Tender Advertisement Notice.**
8. Tenders will be opened immediately after the deadline date and time specified above or any dead line date and times specified later. Tenders will be publicly opened in the presence of the Tenderers' designated representatives who choose to attend at the address below.
9. Late tenders will be rejected.
10. The addresses referred to above are:

A. Address for Submission of Tenders.

Name of Procuring Entity: Embassy of the Republic of Kenya, Addis Ababa Ethiopia.

- (1) Physical address for hand Courier Delivery to an office at the **Embassy of the Republic of Kenya, Yeka KK, Kebele 01, Addis Ababa, Ethiopia.**
- (2) Postal Address: Embassy of the Republic of Kenya,
P.O. BOX 3301,
Yeka KK, Kebele 01,
ADDIS ABABA, ETHIOPIA.
- (3) Telephone: +251929234564, +251116610033
Email: addisababa@mfa.go.ke, keaddisababa@gmail.com

B. Address for Submission of Tenders.

- (1) Name of Procuring Entity: EMBASSY OF THE REPUBLIC OF KENYA, ADDIS ABABA, ETHIOPIA.
- (2) Postal Address: Embassy of the Republic of Kenya,
P.O. BOX 3301,
Yeka KK, Kebele 01,
ADDIS ABABA, ETHIOPIA.

SECTION I - TENDERING PROCEDURES

1. SECTION I - INSTRUCTIONS TO TENDERERS

A GENERAL PROVISIONS

1.0 Scope of tender

1.1 The Procuring Entity as defined in the Appendix to Conditions of Contract invites tenders for Works Contract as described in the tender documents. The name, identification, and number of lots (contracts) of this Tender Document are specified in the TDS.

1.2 Throughout this tendering document:

- a) The term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, including if specified in the TDS, distributed or received through the electronic-procurement system used by the Procuring Entity) with proof of receipt;
- b) if the context so requires, “singular” means “plural” and vice versa;
- c) “Day” means calendar day, unless otherwise specified as “Business Day”. A Business Day is any day that is an official working day of the Procuring Entity. It excludes official public holidays.

2.0 Fraud and corruption

2.1 The tenderer shall not engage in any corrupt or fraudulent practice and if found to have done so shall be disqualified.

3.0 Eligible tenderers

3.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution or an individual or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter in to such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the tendering process and, in the event the JV is awarded the Contract, during contract execution. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender.

4.0 Tenderer's responsibilities

4.1 The tenderer shall bear all costs associated with the preparation and submission of his/her tender, and the Procuring Entity will in no case be responsible or liable for those costs.

4.2 The tenderer, at the tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the Site of the Works and its surroundings and obtain all information that may be necessary for preparing the tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the tenderer's own expense.

4.3 The Tenderer and any of its personnel or agents will be granted permission by the Procuring Entity to enter upon its premises and lands for the purpose of such visit. The Tenderer shall indemnify the Procuring Entity against all liability arising from death or personal injury, loss of or damage to property, and any other losses and expenses incurred as a result of the examination and inspection.

B. CONTENTS OF TENDER DOCUMENTS

5.0 Sections of Tender Document

- 5.1** The tender document consists of Parts specified below, and which should be read in conjunction with any Addenda issued in accordance with ITT 7.0.

Tendering Procedures

Instructions to Tenderers

Tender Data Sheet (TDS)

Evaluation and Qualification Criteria Section

Tendering Forms

Conditions of Contract and Contract Forms

General Conditions (GCC)

Special Conditions of Contract

Contract Forms

- 5.2** The Invitation to Tender Notice issued by the Procuring Entity is not part of the Contract documents. Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the Tender document, responses to requests for clarification, the minutes of a pre-arranged site visit and those of the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 6.0. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.

- 5.3** The Tenderer is expected to examine all instructions, forms, terms, and specifications in the Tender Document and to furnish with its Tender all information and documentation as is required by the Tender document.

6.0 Clarification of Tender Document, Site Visit, Pre-tender Meeting

A Tenderer requiring any clarification of the Tender Document shall contact the Procuring Entity in writing at the Procuring Entity's address specified in the **TDS** or raise its enquiries during the pre-Tender meeting if provided for. The Procuring Entity will respond in writing to any request for clarification, provided that such request is received no later than the period specified in the **TDS** prior to the deadline for submission of tenders.

- 6.1** The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the site(s) of the required contracts and obtain all information that may be necessary for preparing a tender. The costs of visiting the Site shall be at the Tenderer's own expense. The Procuring Entity shall specify in the **TDS** if a pre-arranged Site visit and or a pre-tender meeting will be held, when and where. The Tenderer's designated representative is invited to attend a pre-arranged site visit and a pre-tender meeting, as the case may be. The purpose of the site visit and the pre-tender meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

- 6.2** The Tenderer is requested to submit any questions in writing, to reach the Procuring Entity not later than the period specified in the **TDS** before the meeting.

7.0 Amendment of Tender Documents

- 7.1** At any time prior to the deadline for submission of Tenders, the Procuring Entity may amend the Tender Documents by issuing addenda.
- 7.2** Any addendum issued shall be part of the Tender Documents and shall be communicated in writing to all who have obtained the Tender Documents from the Procuring Entity.
- 7.3** To give Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Procuring Entity shall extend the deadline for the submission of Tenders.

C. PREPARATION OF TENDERS

8.0 Cost of Tendering

The Tenderer shall bear all costs associated with the preparation and submission of its Tender, and the Procuring Entity shall not be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

9.0 Language of Tender

The Tender, as well as all correspondence and documents relating to the tender exchanged by the tenderer and the Procuring Entity, shall be written in the English Language. Supporting documents and printed literature that are part of the Tender may be in another language provided they are accompanied by an accurate and notarized translation of the relevant passages into the English Language, in which case, for purposes of interpretation of the Tender, such translation shall govern.

10.0 Documents Comprising the Tender

11.0 The Tender shall comprise the following:

- a) Form of Tender;
- b) Schedules including priced Bill of Quantities,
- c) Tender Security;
- d) Alternative Tender, if permissible;
- e) Any other document required in the **TDS**.

- 11.1** Tenders submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Tender shall be signed by all members and submitted with the Tender, together with a copy of the proposed JV Agreement. Change of membership and conditions of the JV prior to contract signature will render the tender liable for disqualification.

12.0 Alternative Tenders

- 12.1** Unless otherwise specified in the TDS, alternative Tenders shall not be considered.

- 12.2** When alternative times for completion are explicitly invited, a statement to that effect will be included in the **TDS**, and the method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.

13.0 Tender Prices and Discounts

- 13.1** The Tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Tenderer shall be deemed

covered by the rates for other items in the Bill of Quantities and will not be paid for separately by the Procuring Entity. An item not listed in the priced Bill of Quantities shall be assumed to be not included in the Tender, and provided that the Tender is determined substantially responsive notwithstanding this omission, the average price of the item quoted by substantially responsive Tenderers will be added to the Tender price and the equivalent total cost of the Tender so determined will be used for price comparison.

13.2 The price to be quoted in the Form of Tender shall be the total price of the Tender, including any discounts offered.

13.4 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 30 days prior to the deadline for submission of Tenders, shall be included in the rates and prices and the total Tender Price submitted by the Tenderer.

14.0 Currencies of Tender and Payment

14.1 The currency(ies) of the Tender and the currency(ies) of payments shall be the same.

14.2 Tenderers shall quote entirely in US. Dollars. The unit rates and the prices shall be quoted by the Tenderer in the Bill of Quantities entirely in US. Dollars.

14.3 Tenderers may be required by the Procuring Entity to justify, to the Procuring Entity's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the unit rates and prices and shown in the Schedule of Adjustment Data in the Appendix to Tender are reasonable, in which case a detailed breakdown of the foreign currency requirements shall be provided by Tenderers.

15.0 Documents Comprising the Technical Proposal

The Tenderer shall furnish a technical proposal including a statement of work methods, equipment, personnel, schedule and any other information, Tender Forms, in sufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work's requirements and the completion time.

16.0 Documents Establishing the Eligibility and Qualifications of the Tenderer

16.1 Tenderers shall complete the Form of Tender, included in Section II, Tender Forms, to establish Tenderer's eligibility.

16.2 In accordance with the Evaluation and Qualification Criteria, Tenderer shall provide the information requested in this tender.

17.0 Period of Validity of Tenders

17.1 Tenders shall remain valid for the Tender Validity period specified in the **TDS**. A tender valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.

17.2 In exceptional circumstances, prior to the expiration of the Tender validity period, the Procuring Entity may request Tenderers to extend the period of validity of their Tenders. The request and the responses shall be made in writing.

18.0 Tender Security

The Tenderer shall furnish as part of its Tender a Tender Security as specified in the **TDS**, in original form, and in the amount and currency **specified** in the **TDS**.

19.0 Format and Signing of Tender

The Tenderer shall prepare one original of the documents comprising the Tender clearly marked "ORIGINAL." Tenderers shall mark as "CONFIDENTIAL" all information in their Tenders which

is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.

- a) The original and all copies of the Tender shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Tenderer.
- b) In case the Tenderer is a JV, the Tender shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.
- c) Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Tender.

D. SUBMISSION AND OPENING OF TENDERS

20.0 Sealing and Marking of Tenders

- a) The Tenderer shall deliver the Tender in a single sealed envelope, or in a single sealed package, or in a single sealed container bearing the name and Reference number of the Tender, addressed to the Procuring Entity and a warning not to open before the time and date for Tender opening date.

21.0 Deadline for Submission of Tenders

- a) Tenders must be received by the Procuring Entity at the address specified in the **TDS** and no later than the date and time also specified in the **TDS**.
- b) The Procuring Entity may, at its discretion, extend the deadline for the submission of Tenders.

22.0 Late Tenders

The Procuring Entity shall not consider any Tender that arrives after the deadline for submission of tenders.

23.0 Tender Opening

The Procuring Entity shall publicly open and read out all Tenders received by the deadline, at the date, time and place specified **in the TDS**, in the presence of Tenderers' designated representatives who chooses to attend.

First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelopes with the corresponding Tender shall not be opened but returned to the Tenderer. No Tender withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Tender opening.

24.0 EVALUATION AND COMPARISON OF TENDERS

24.1 Confidentiality

- a) Information relating to the evaluation of Tenders and recommendation of contract award shall not be disclosed to Tenderers or any other persons not officially concerned with the Tender process until information on Intention to Award the Contract is transmitted to all Tenderers.
- b) Any effort by a Tenderer to influence the Procuring Entity in the evaluation of the Tenders or Contract award decisions may result in the rejection of its tender.

25.0 Determination of Responsiveness

- a) The Procuring Entity's determination of a Tender's responsiveness is to be based on the contents of the tender itself.
- b) If a tender is not substantially responsive to the requirements of the tender document, it shall be rejected by the Procuring Entity and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

26.0 Arithmetical Errors

- a) The tender sum as submitted and read out during the tender opening shall be absolute and final and shall not be the subject of correction, adjustment or amendment in any way by any person or entity.
- b) Provided that the Tender is substantially responsive, the Procuring Entity shall handle errors on the following basis: -
- c) Any error detected if considered a major deviation that affects the substance of the tender, shall lead to disqualification of the tender as non-responsive.
- d) Any errors in the submitted tender arising from a miscalculation of unit price, quantity, subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive. and
- e) if there is a discrepancy between words and figures, the amount in words shall prevail.
- f) Tenderers shall be notified of any error detected in their bid during the notification of award.

27.0 Nominated Subcontractors

- a) Unless otherwise stated in the **TDS**, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected/nominated by the Procuring Entity. In case the Procuring Entity nominates a subcontractor, the subcontract agreement shall be signed by the Subcontractor and the Procuring Entity. The main contract shall specify the working arrangements between the main contractor and the nominated subcontractor.
- b) Tenderers may propose sub-contracting up to the percentage of total value of contracts or the volume of works as specified in the **TDS**. Subcontractors proposed by the Tenderer shall be fully qualified for their parts of the Works.
- c) Domestic subcontractor's qualifications shall not be used by the Tenderer to qualify for the Works unless their specialized parts of the Works were previously designated so by the Procuring Entity in the **TDS** as can be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the qualifications of the Specialized Subcontractors proposed by the Tenderer may be added to the qualifications of the Tenderer.

28.0 Evaluation of Tenders

- a) The Procuring Entity shall use the criteria and methodologies listed in this document. No other evaluation criteria or methodologies shall be permitted.

29.0 Comparison of tenders

The Procuring Entity shall compare the evaluated costs of all substantially responsive Tenders to determine the Tender that has the lowest evaluated cost.

30.0 Lowest evaluated tender

Having compared the evaluated prices of Tenders, the Procuring Entity shall determine the Lowest Evaluated Tender. The Lowest Evaluated Tender is the Tender of the Tenderer that meets the Qualification Criteria and whose Tender has been determined to be:

- a) Most responsive to the Tender document; and
- b) the lowest evaluated price.

31.0 Procuring entity's right to accept any tender, and to reject any or all tenders.

The Procuring Entity reserves the right to accept or reject any Tender and to annul the Tender process and reject all Tenders at any time prior to Contract Award, without thereby incurring any liability to Tenderers. In case of annulment, all Tenders submitted and specifically, Tender securities, shall be promptly returned to the Tenderers.

F. AWARD OF CONTRACT

32.0 Award criteria

The Procuring Entity shall award the Contract to the successful tenderer whose tender has been determined to be the Lowest Evaluated Tender.

33.0 Notice of Intention to Enter into a Contract/Notification of Award

Upon award of the contract and prior to the expiry of the Tender Validity Period the Procuring Entity shall issue a Notification of Intention to Enter into a Contract/Notification of award to all tenderers which shall contain, at a minimum, the following information:

- a) the name and address of the Tenderer submitting the successful tender;
- b) the Contract price of the successful tender;
- c) a statement of the reason(s) the tender of the unsuccessful tenderer to whom the letter is addressed was unsuccessful, unless the price information in (b) above already reveals the reason;
- d) the expiry date of the Standstill Period; and
- e) instructions on how to request a debriefing and/ or submit a complaint during the stand still period.

34.0 Stand still Period

- a) The Contract shall not be signed earlier than the expiry of a Standstill Period of 14 days to allow any dissatisfied tender to launch a complaint. Where only one Tender is submitted, the Standstill Period shall not apply.
- b) Where a Standstill Period applies, it shall commence when the Procuring Entity has transmitted to each Tenderer the Notification of Intention to Enter into a Contract with the successful Tenderer.

35.0 Letter of Award

Prior to the expiry of the Tender Validity Period and upon expiry of the Standstill Period, upon addressing a complaint that has been filed with in the Standstill Period, the Procuring Entity shall transmit the Letter of Award to the successful Tenderer. The letter

of award shall request the successful tenderer to furnish the Performance Security within 21 days of the date of the letter.

36.0 Signing of Contract

- a) Upon the expiry of the fourteen days of the Notification of Intention to enter in to contract and upon the parties meeting their respective statutory requirements, the Procuring Entity shall send the successful Tenderer the Contract Agreement.
- b) Within fourteen (14) days of receipt of the Contract Agreement, the successful Tenderer shall sign, date, and return it to the Procuring Entity.
- c) The written contract shall be entered into within the period specified in the notification of award and before expiry of the tender validity period.

37.0 Performance Security

- a) Within twenty-one (21) days of the receipt of the Letter of Award from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and, any other documents required in the **TDS**, in accordance with the General Conditions of Contract.
- b) Failure of the successful Tenderer to submit the above-mentioned Performance Security and other documents required in the **TDS** or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security. In that event the Procuring Entity may award the Contract to the Tenderer offering the next Best Evaluated Tender.

TENDER DATA SHEET (TDS)

The following specific data shall complement, supplement, or amend the provisions in the Instructions to Tenderers (ITT). Whenever there is a conflict, the provisions herein shall prevail over those in ITT.

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
A. General	
ITT 1.1	The name of the contract is PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA – ETHIOPIA. The reference number of the Contract is AS PER TENDER ADVERTISEMENT NOTICE The scope of works includes but not limited to: 1. Renovation Chancery Building; 2. Construction of new outdoor Kitchen 3. Renovation of Ambassador’s Residence; 4. Renovation of Staff Residence; 5. Renovation of Civil Works 6. Electrical Works Installation 7. Structured Cabling, CCTV and Access Control Installation Works
B. Contents of Tender Document	
ITT 6.0	The Tenderer will submit any request for clarifications in writing at the Address: Embassy of the Republic of Kenya, P.O. BOX 3301, Yeka KK, Kebele 01, ADDIS ABABA, ETHIOPIA. Telephone: +251929234564, +251116610033 Email: addisababa@mfa.go.ke, keaddisababa@gmail.com
ITT 6.1	(A) A pre-arranged pretender site visit <i>shall</i> take place at the following date, time and place: Date: AS INDICATED IN THE TENDER ADVERTISEMENT NOTICE Time: AS INDICATED IN THE TENDER ADVERTISEMENT NOTICE Place: EMBASSY OF THE REPUBLIC OF KENYA, ADDIS ABABA, ETHIOPIA. (B) Pre-Tender meeting SHALL TAKE PLACE ON THE DATE INDICATED IN THE TENDER ADVERTISEMENT NOTICE
ITT 7.1	The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than Three Working Days after the tender issuance day.
ITT 17.0	Tender Validity Period: 140 DAYS
ITT 18.0	Tender Security: SHALL BE IN THE FORM OF GUARANTEE FROM A REPUTABLE BANK, AND IN US. DOLLARS EQUIVALENT TO 1% OF THE TENDER SUM
ITT 21.0	Deadline and Address for Submission of Tenders: EMBASSY OF THE REPUBLIC OF KENYA, ADDIS ABABA, ETHIOPIA ON THE DATE IN THE TENDER ADVERTISEMENT NOTICE
ITT 23.0	Tender Opening Date and Time: AS PER TENDER INVITATION NOTICE
ITT 36.0	Performance Security shall be 5% of the Tender Sum and shall be in the form of guarantee from a reputable bank based in the Federal Democratic Republic of Ethiopia .

SECTION II - EVALUATION AND QUALIFICATION CRITERIA

SECTION II - EVALUATION AND QUALIFICATION CRITERIA

Tender Evaluation shall be in three stages namely:

- a) Preliminary;
- b) Technical; and
- c) Financial

STAGE1-PRELIMINARY EVALUATION

The Tenderer shall be required to submit the following:

- i) A valid Certificate of Incorporation;
- ii) A tender document completely filled and signed by the person or persons authorized to do so on behalf of the Tenderer;
- iii) A completely filled, signed and stamped Form of Tender;
- iv) A valid tender security in the form of bank guarantee equivalent to 1% of the tender sum.

Note: Any tenderer that does not meet all the above requirements shall be disqualified.

STAGE 2- TECHNICAL EVALUATION

In this stage, the tenderer shall be required to provide the following:

- a) Evidence of access to financial resources amounting to at least 10% of the tender sum;
- b) Evidence of ownership of at least 2 No. 14-tonne lorries; and
- c) Proof of at least 2 No. similar projects done in the last three years.

Note: Any tender that does not meet the above requirements shall be disqualified.

STAGE-FINANCIAL EVALUATION

The evaluation shall be in three stages as follows:

- a) Determination of Arithmetic Errors for the bidder (and all their joint venture partners);
- b) Consistency of the Rates for the bidder (and all their joint venture partners); and

A) Determination of the Arithmetic Errors

Arithmetic Errors will be corrected by the Procuring Entity as follows:

- i) In the event of a discrepancy between the amount as stated in the form of Tender and the corrected tender figure in the Main summary of the Bills of Quantities, the amount as stated in the Form of tender shall prevail.
- ii) Error correction factor shall be computed by expressing the difference between the amount and the corrected tender sum as a percentage of the corrected contract works
- iii) The Error correction factor shall be applied to all contract works (as a rebate or addition as the case may be) for the purposes of valuations for Interim Certificates and valuations of variations.

B) Consistency of the Rates

The evaluation committee will compare the consistency of rates for similar items and note all inconsistencies of the rates for similar items.

RECOMMENDATION FOR AWARD

The firm achieving the lowest evaluated price will be awarded the contract.

TENDER FORMS

FORM OF TENDER-(To be on Company's Letterhead)

INSTRUCTIONS TO TENDERERS

Dear Sirs,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above named Works, we, the undersigned offer to construct and complete the Works and remedy any defects therein for the sum¹ of US. Dollars *[[Amount in figures]* _____ US. Dollars *[amount in words]*

2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Architect notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Special Conditions of Contract.
3. We agree to adhere by this tender until _____ *[Insert date]*, and it shall remain binding upon us and may be accepted at any time before that date.
4. We understand that you are not bound to accept the lowest or any tender you may receive.

Name of the Tenderer: **[insert complete name of person signing the Tender]*

Name of the person duly authorized to sign the Tender on behalf of the Tenderer: ***[insert complete name of person duly authorized to sign the Tender]*

Title of the person signing the Tender: *[insert complete title of the person signing the Tender]*

Signature of the person named above: *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* day of *[insert month]*, *[insert year]*

Date signed _____ day of _____,

Notes

** In the case of the Tender submitted by joint venture specify the name of the Joint Venture as Tenderer.*

***Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender*

¹ This sum should be carried forward from the Summary of the Bills of Quantities.

FORM OF TENDER SECURITY-DEMAND BANK GUARANTEE (To be on the issuing Institutions Letterhead)

Beneficiary: _____ **Request for Tenders No:** _____

Date: _____ **TENDER GUARANTEE No.:** _____

Guarantor: _____

1. We have been informed that _____ (herein after called "the Applicant") has submitted or will submit to the Beneficiary its Tender (hereinafter called "the Tender") for the execution _____ of _____ under Request for Tenders No. _____ ("the ITT").
2. Furthermore, we understand that, according to the Beneficiary's conditions, Tenders must be supported by a Tender guarantee.
3. At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of (_____) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:
 - a) has withdrawn its Tender during the period of Tender validity set forth in the Applicant's Letter of Tender ("the Tender Validity Period"), or any extension thereto provided by the Applicant; or
 - b) having been notified of the acceptance of its Tender by the Beneficiary during the Tender Validity Period or any extension thereto provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance.
4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) thirty days after the end of the Tender Validity Period.
5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

[signature(s)]

SECTION III - THE CONDITIONS OF CONTRACT AND CONTRACT FORMS

GENERAL CONDITIONS OF CONTRACT (GCC)

Name of Procuring Entity: EMBASSY OF THE REPUBLIC OF KENYA, ADDIS ABABA,
ETHIOPIA

Address: EMBASSY OF THE REPUBLIC OF KENYA,
P.O. BOX 3301,
YEKA KK, KEBELE 01, ADDIS ABABA,
ETHIOPIA.

Architects Name and Address: WORKS SECRETARY, STATE DEPARTMENT FOR
PUBLIC WORKS, MINISTRY OF LANDS, PUBLIC
WORKS, HOUSING AND URBAN DEVELOPMENT,
P.O BOX 30743-00100, NAIROBI-KENYA

(a) General Conditions of Contract

1. GENERAL PROVISIONS

1.1 Definitions

In this Contract, except where context otherwise requires, the following terms shall be interpreted as indicated below. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

“Accepted Contract Amount” means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

“Base Date” means a date 30 day prior to the submission of tenders.

“Bill of Quantities” means the priced and completed Bill of Quantities forming part of the tender.

“Completion Date” means the date of completion of the Works as certified by the Engineer.

“Contract Price” means the price defined in the contract and thereafter as adjusted in accordance with the provisions of the Contract.

“Contract” means the agreement entered into between the Procuring Entity and the Contractor as recorded in the Agreement Form and signed by the parties including all attachments and appendices thereto and all documents incorporated by reference therein to execute, complete, and maintain the Works.

“Contractor's Documents” means the calculations, computer programs and other software, progress reports, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.

“Contractor's Equipment” means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor's Equipment excludes Temporary Works, Procuring Entity's Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

“Contractor’s Personnel” means the Contractor's Representative and all personnel whom the Contractor utilizes on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.

“Contractor's Representative” means the person named by the Contractor in the Contractor appointed from time to time by the Contractor who acts on behalf of the Contractor.

“Contractor” means the person(s) named as contractor in the Form of Tender accepted by the Procuring Entity.

“Cost” means expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

“Day” means a calendar day and **“year”** means 365 days.

“Dayworks” means Work inputs subject to payment on a time basis for labour and the associated materials and plant.

“Defect” means any part of the Works not completed in accordance with the Contract.

“Defects Liability Certificate” means the certificate issued by Architect upon correction of defects by the Contractor.

“Defects Liability Period” means the period named in the Special Conditions of Contract and calculated from the Completion Date, within which the contractor is liable for any defects that may develop in the handed over works.

“Defects Notification Period” means the period for notifying defects in the Works or a Section (as the case may be) under Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects], which extends over the days stated in the Special Conditions of Contract.

“Drawings” means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Procuring Entity in accordance with the Contract.

“Final Payment Certificate” means the payment certificate issued under Sub-Clause 14.13 [Issue of Final Payment Certificate].

“Final Statement” means the statement defined in Sub-Clause 14.11 [Application for Final Payment Certificate].

“Force Majeure” is defined in Clause 19 [Force Majeure].

“Foreign Currency” means a currency of another country (not Ethiopia) in which part (or all) of the Contract Price is payable, but not the Local Currency.

“Goods” means Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.

“Interim Payment Certificate” means a payment certificate issued under Clause 14 [Contract Price and Payment], other than the Final Payment Certificate.

“Laws” means all national legislation, statutes, ordinances, and regulations and by-laws of any legally constituted public authority.

“Letter of Acceptance” means the letter of formal acceptance of a tender, signed by Procuring Entity, including any annexed memoranda comprising agreements between and signed by both Parties.

“Local Currency” means the currency of the Federal Democratic Republic of Ethiopia (USD.).

“Materials” means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under

the Contract.

“Notice of Dissatisfaction” means the notice given by either Party to the other under Sub-Clause 20.3 indicating its dissatisfaction and intention to commence arbitration.

“Special Conditions of Contract” means the pages completed by the Procuring Entity entitled Special Conditions of Contract which constitute Part A of the Special Conditions.

“Party” means the Procuring Entity or the Contractor, as the context requires.

“Payment Certificate” means a payment certificate issued under Clause 14 [Contract Price and Payment].

“Performance Certificate” means the certificate issued under Sub-Clause 11.9 [Performance Certificate].

“Performance Security” means the security (or securities, if any) under Sub-Clause 4.2 [Performance Security].

“Permanent Works” means the permanent works to be executed by the Contractor under the Contract.

“Plant” means the apparatus, machinery and other equipment intended to form or forming part of the Permanent Works, including vehicles purchased for the Procuring Entity and relating to the construction or operation of the Works.

“Procuring Entity's Equipment” means the apparatus, machinery and vehicles (if any) made available by Procuring Entity for the use of the Contract or in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Procuring Entity.

“Procuring Entity's Personnel” means the Engineer, the Engineer's assistants and all other staff, labor and other employees of the Architect and of the Procuring Entity; and any other personnel notified to the Contractor, by the Procuring Entity or the Engineer, as Procuring Entity's Personnel.

“Procuring Entity” means the Entity named in the Special Conditions of Contract.

“Engineer” is the person named in the Appendix to Conditions of Contract (or any other competent person appointed by the Procuring Entity and notified to the Contractor, to act in replacement of the Engineer) who is responsible for supervising the execution of the Works and administering the Contract and shall be an “Architect” or a “Quantity Surveyor” registered under the Architects and Quantity Surveyors Act Cap 525 or an “Engineer” registered under Engineers Registration Act Cap 530.

“Engineer” means the person appointed by the Procuring Entity to act as the Architect for the purposes of the Contract and named in the Special Conditions of Contract, or other person appointed from time to time by the Procuring Entity and notified to the Contractor

“Provisional Sum” means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.6 [Provisional Sums].

“Retention Money” means the accumulated retention moneys which the Procuring Entity retains under Sub-Clause 14.3 [Application for Interim Payment Certificates] and pays under Sub-Clause 14.9 [Payment of Retention Money].

“Schedules” means the document(s) entitled schedules, completed by the Contractor and submitted with the Form of Tender, as included in the Contract.

“Section” means a part of the Works specified in the Special Conditions of Contract as a Section (if any)

“Site Investigation Reports” are those reports that may be included in the tendering documents which are factual and interpretative about the surface and sub-surface conditions at the Site.

“Site” means the places where the Permanent Works are to be executed, including storage and working areas, and to which Plant and Materials are to be delivered, and any other places as may be specified

in the Contract as forming part of the Site.

“Specification” means the document entitled specification, as included in the Contract, and any additions and modifications to the specification in accordance with the Contract. Such document specifies the Works.

“Start Date” or “Commencement Date” is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with the Site possession date(s).

“Statement” means a statement submitted by the Contractor as part of an application, under Clause 14 [Contract Price and Payment], for a payment certificate.

“Subcontractor” means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works.

“Taking-Over Certificate” means a certificate issued under Clause 10 [Procuring Entity's Taking Over].

“Temporary Works” means all temporary works of every kind (other than Contractor's Equipment) required on Site for the purpose of execution and completion of the Permanent Works and the remedying of any defects. It also means works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

“Tender” means the Form of Tender and all other documents which the Contractor submitted with the Form of Tender, as included in the Contract.

“Tests after Completion” means the tests (if any) which are specified in the Contract and which are carried out in accordance with the Specification after the Works or a Section (as the case may be) are taken over by the Procuring Entity.

“Tests on Completion” means the tests which are specified in the Contractor agreed by both Parties or instructed as a Variation, and which are carried out under Clause 9 [Tests on Completion] before the Works or a Section (as the case may be) are taken over by the Procuring Entity.

“Time for Completion” means the time for completing the Works or a Section (as the case may be) as stated in the Special Conditions of Contract (with any extension calculated from the Commencement Date.

“Unforeseeable” means not reasonably foreseeable by an experienced contractor by the Base Date.

“Variation” means any change to the Works, which is instructed or approved as a variation under Clause 13 [Variations and Adjustments].

“Works” means the items the Procuring Entity requires the Contractor to undertake as defined in the Appendix to Conditions of Contract. **“Works” may** also mean the Permanent Works and the Temporary Works, or either of them as appropriate.

1.2 Interpretation

In the Contract, except where the context requires otherwise:

- a) Words indicating one gender include all genders;
- b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- c) provisions including the word “agree”, “agreed” or “agreement” require the agreement to be recorded in writing;
- d) “written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

1.3 Communications

- 1.3.1 Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:
- a) In writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Special Conditions of Contract; and
 - b) delivered, sent or transmitted to the address or the recipient's communications as stated in the Special Conditions of Contract. However:
 - i) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
 - ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.
- 1.3.2 Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed. When a certificate is issued to a Party, the certifier shall send a copy to the other Party. When a notice is issued to a Party, by the other Party or the Engineer, a copy shall be sent to the Architect or the other Party, as the case may be.

1.4 Law and Language

- 1.4.1 The Contract shall be governed by the laws of **Kenya**.
- 1.4.2 The ruling language of the Contract shall be **English**.

1.5 Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- a) The Contract Agreement,
- b) The Letter of Acceptance,
- c) The Special Conditions – Part A,
- d) the Special Conditions – Part B
- e) the General Conditions of Contract
- f) the Form of Tender,
- g) the Specifications and Bills of Quantities
- h) the Drawings, and
- i) the Schedules and any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Architect shall issue any necessary clarification or instruction.

1.6 Contract Agreement

The Parties shall enter into a Contract Agreement within 14 days after the Contractor receives the Contract Agreement, unless the Special Conditions establish otherwise. The Contract Agreement shall be based upon the form annexed to the Special Conditions. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Procuring Entity.

1.7 Assignment

The Contractor shall not assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, the contractor:

- a) May assign the whole or any part with the prior consent of the Procuring Entity, and
- b) may, as security in favor of a bank or financial institution, assign its right to moneys due, or to become due, under the Contract.

1.8 Care and Supply of Documents

- 1.8.1 The Specifications and Drawings shall be in the custody and care of the Procuring Entity. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawings and Bills of Quantities shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.
- 1.8.2 Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Procuring Entity. Unless otherwise stated in the Contract, the Contractor shall supply to the Architect two copies of each of the Contractor's Documents.
- 1.8.3 The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Procuring Entity's Personnel shall have the right of access to all these documents at all reasonable times.
- 1.8.4 If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.

1.9 Timely provision of Drawings or Instructions

- 1.9.1 The Contractor shall give notice to the Architect whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable. The notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and the nature and amount of the delay or disruption likely to be suffered if it is late.
- 1.9.2 If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Architect to issue the notified drawing or instruction within a time which is reasonable and is specified in the notice with supporting details, the Contractor shall give a further notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
 - a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) payment of any other associated costs accrued, which shall be included in the Contract Price.
- 1.9.3 After receiving this further notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- 1.9.4 However, if and to the extent that the Architect failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, or costs accrued.

1.10 Procuring Entity's Use of Contractor's Documents

- 1.10.1 As agreed between the Parties, the Contractor shall retain the copyright and other intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.
- 1.10.2 The Contractor shall be deemed (by signing the Contract) to give to the Procuring Entity

a non-terminable transferable non-exclusive royalty-free license to copy, use and communicate the Contractor's Documents, including making and using modifications of them. This license shall:

- a) apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works,
- b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works, and
- c) in the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contract, including replacements of any computers supplied by the Contractor.

1.10.3 The Contractor's Documents and other design documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Procuring Entity or purposes other than those permitted under Sub-Clause 1.10.2.

1.11 Contractor's Use of Procuring Entity's Documents

As agreed between the Parties, the Procuring Entity shall retain the copyright and other intellectual property rights in the Specification, the Drawings and other documents made by (or on behalf of) the Procuring Entity. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of the Contract. They shall not, without the Procuring Entity's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

1.12 Confidential Details

1.12.1 The Contractor's and the Procuring Entity's Personnel shall ensure confidentiality at all times. The confidentiality shall survive termination or completion of the contract. They shall disclose all such confidential and other information as may be reasonably required in order to verify compliance with the Contract and allow its proper implementation.

1.12.2 The Contractor's and the Procuring Entity's Personnel shall also treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.

1.13 Compliance with Laws

The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Special Conditions of Contract:

- a) The Procuring Entity shall have obtained (or shall obtain) the planning, zoning, building permit or similar permission for the Permanent Works, and any other permissions described in the Specifications as having been (or to be) obtained by the Procuring Entity; and the Procuring Entity shall indemnify and hold the Contractor harmless against and from the consequences of any failure to do so; and
- b) the Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licenses and approvals, as required by the Laws in relation to the execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Procuring Entity harmless against and from the consequences of any failure to do so, unless the Contractor is impeded to accomplish

these actions and shows evidence of its diligence.

1.14 Joint and Several Liability

If the Contractor constitutes (under applicable Laws) a joint venture, consortium or other unincorporated grouping of two or more persons:

- a) These persons shall be deemed to be jointly and severally liable to the Procuring Entity for the performance of the Contract;
- b) these persons shall notify the Procuring Entity of their leader who shall have authority to bind the Contractor and each of these persons; and
- c) the Contractor shall not alter its composition or legal status without the prior consent of the Procuring Entity.

1.15 Inspections and Audit by the Procuring Entity

Pursuant to paragraph 2.2(e). of Appendix B to the General Conditions, the Contractor shall permit and shall cause its subcontractors and sub-consultants to permit, the Public Procurement Regulatory Authority, Procuring Entity and/or persons appointed or designated by the Government of Kenya to inspect the Site and/or the accounts and records relating to the procurement process, selection and/or contract execution, and to have such accounts and records audited by auditors appointed by the Procuring Entity if requested by the Procuring Entity. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 15.6 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Procuring Entity's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Procuring Entity's prevailing sanctions procedures).

2 THE PROCURING ENTITY

2.1 Right of Access to the Site

211 The Procuring Entity shall give the Contractor right of access to, and possession of, all parts of the Site within the time (or times) stated in the **Special Conditions of Contract**. The right and possession may not be exclusive to the Contractor. If, under the Contract, the Procuring Entity is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Procuring Entity shall do so in the time and manner stated in the Specification. However, the Procuring Entity may withhold any such right or possession until the Performance Security has been received.

212 If no such time is stated in the Special Conditions of Contract, the Procuring Entity shall give the Contractor right of access to, and possession of, the Site within such times as required to enable the Contractor to proceed without disruption in accordance with the programme submitted under Sub-Clause 8.3 [Programme].

213 If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Procuring Entity to give any such right or possession within such time, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such Cost-plus profit, which shall be included in the Contract Price.

214 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

However, if and to the extent that the Procuring Entity's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.

22 Permits, Licenses or Approvals

22.1 The Procuring Entity shall provide, at the request of the Contractor, such reasonable assistance as to allow the Contractor to obtain properly:

- a) Copies of the Laws of Kenya which are relevant to the Contract but are not readily available, and
- b) any permits, licenses or approvals required by the Laws of Kenya:
- i) which the Contractor is required to obtain under Sub-Clause 1.13 [Compliance with Laws],
- ii) for the delivery of Goods, including clearance through customs, and
- iii) for the export of Contractor's Equipment when it is removed from the Site.

23 Procuring Entity's Personnel

The Procuring Entity shall be responsible for ensuring that the Procuring Entity's Personnel and the Procuring Entity's other contractor son the Site:

- a) co-operate with the Contractor's efforts under Sub-Clause 4.6 [Co-operation], and
- b) take actions similar to those which the Contractor is required to take under sub-paragraphs (a), (b) and (c) of Sub-Clause 4.8 [Safety Procedures] and under Sub-Clause 4.18 [Protection of the Environment].

24 Procuring Entity's Financial Arrangements

The Procuring Entity shall make and maintain all necessary financial arrangements which will enable the Procuring Entity to pay the Contract Price punctually (as estimated at that time) in accordance with Clause14 [Contract Price and Payment].

3. THE ENGINEER

3.1 Architect Duties and Authority

3.1.1 The Procuring Entity shall appoint the Architect who shall carry out the duties as signed to him in the Contract. The Architect staff shall include suitably qualified Assistants and other professionals who are competent to carry out these duties. The Architect Name and Address shall be provided in the **Special Conditions of Contract**.

3.1.2 The Architect shall have no authority to amend the Contract.

3.1.3 The Architect May exercise the authority attributable to the Architect as specified in or necessarily to be implied from the Contract. If the Architects required to obtain the approval of the Procuring Entity before exercising a specified authority, the requirements shall be as stated in the **Special Conditions of Contract**. The Procuring Entity shall promptly inform the Contractor of any change to the authority attributed to the Engineer.

3.1.4 However, whenever the Architect exercises a specified authority for which the Procuring Entity's approvals required, then (for the purposes of the Contract) the contractor shall require the Architect to provide evidence of such approval before complying with the instruction.

3.1.5 Except as otherwise stated in these Conditions:

- a) Whenever carrying out duties or exercising authority, specified in or implied by the

- Contract, the Architect shall be deemed to act for the Procuring Entity;
- b) the Architect has no authority to relieve either Party of any duties, obligations or responsibilities under the Contract;
 - c) any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by the Architect (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract, including responsibility for errors, omissions, discrepancies and non-compliances; and
 - d) any act by the Architect in response to a Contractor's request shall be notified in writing to the Contractor within 14 days of receipt.

3.16 The following provisions shall apply:

The Architect shall obtain the specific approval of the Procuring Entity before taking action under the following Sub-Clauses of these Conditions:

- a) Sub-Clause 4.12: agreeing or determining an extension of time and/or additional cost.
- b) Sub-Clause 13.1: instructing a Variation, except;
 - i) In an emergency situation as determined by the Engineer, or
 - ii) If such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the **Special Conditions of Contract**.
- c) Sub-Clause 13.3: Approving a proposal for Variation submitted by the Contractor in accordance with Sub Clause 13.1 or 13.2.
- d) Sub-Clause 13.4: Specifying the amount payable: **Only US Dollars is applicable.**

3.17 Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibility under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forth with comply, despite the absence of approval of the Procuring Entity, with any such instruction of the Engineer. The Architect shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 13 and shall notify the Contractor accordingly, with a copy to the Procuring Entity.

3.2 Delegation by the Engineer

3.2.1 The Architect may from time to time assign duties and delegate authority to assistants and may also revoke such assignment or delegation. These assistants may include a resident Engineer, and/or independent inspectors appointed to inspect and/ or test items of Plant and/or Materials. The assignment, delegation or revocation shall be in writing and shall not take effect until copies have been received by both Parties. However, unless otherwise agreed by both Parties, the Architect shall not delegate the authority to determine any matter in accordance with Sub-Clause 3.5 [Determinations].

3.2.2 Each assistant, to whom duties have been assigned or authority has been delegated, shall only be authorized to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by an assistant, in accordance with the delegation, shall have the same effect as though the act had been an act of the Engineer. However:

- a) Any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Architect to reject the work, Plant or Materials;

- b) If the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who shall promptly confirm, reverse or vary the determination or instruction.

3.3 Instructions of the Engineer

- 3.3.1 The Architect may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the Works and the remedying of any defects, all in accordance with the Contract. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated under Clause 3.2.1.
- 3.3.2 The Contractor shall comply with the instructions given by the Architect or delegated assistant, on any matter related to the Contract. Whenever practicable, their instructions shall be given in writing. If the Architect or a delegated assistant:
 - a) Gives an oral instruction,
 - b) receives a written confirmation of the instruction, from (or on behalf of) the Contractor, within two working days after giving the instruction, and
 - c) does not reply by issuing a written rejection and/or instruction within two working days after receiving the confirmation,

Then the confirmation shall constitute the written instruction of the Architect or delegated assistant (as the case may be).

3.4 Replacement of the Engineer

If the Procuring Entity intends to replace the Engineer, the Procuring Entity shall, in not less than 21 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the intended person to replace the Engineer.

3.5 Determinations

- 3.5.1 Whenever these Conditions provide that the Architect shall proceed in accordance with this Sub-Clause 3.5 to agree or determine any matter, the Architect shall consult with each Party in an endeavor to reach agreement. If agreement is not achieved, the Architect shall make a fair determination in accordance with the Contract, taking due regard of all relevant circumstances.
 - 3.5.1.1 The Architect shall give notice to both Parties of each agreement or determination, with supporting particulars, within 30 days from the receipt of the corresponding claim or request except when otherwise specified. Each Party shall give effect to each agreement or determination unless and until revised under Clause 20 [Claims, Disputes and Arbitration].

4 THE CONTRACTOR

4.1 Contractor's General Obligations

- 4.1.1 The Contractor shall design (to the extent specified in the Contract), execute and complete the Works in accordance with the Contract and with the Architect instructions, and shall remedy any defects in the Works.
- 4.1.2 The Contractor shall provide the Plant and Contractor's Documents specified in the Contract, and all Contractor's Personnel, Goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for this design, execution, completion and remedying of defects.

- 4.1.3 All equipment, material, and services to be incorporated in or required for the Works shall have their origin in any eligible source country.
- 4.1.4 The Contractor shall be responsible for the adequacy, stability and safety of all Site operations and of all methods of construction. Except to the extent specified in the Contract, the Contractor (i) shall be responsible for all Contractor's Documents, Temporary Works, and such design of each item of Plant and Materials as is required for the item to be in accordance with the Contract, and (ii) shall not otherwise be responsible for the designer specification of the Permanent Works.
- 4.1.5 The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer.
- 4.1.6 If the Contract specifies that the Contractor shall design any part of the Permanent Works, then unless otherwise stated in the Special Conditions:
- a) The Contractor shall submit to the Architect the Contractor's Documents for this part in accordance with the procedures specified in the Contract;
 - b) these Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in Sub-Clause 1.4 [Law and Language], and shall include additional information required by the Architect to add to the Drawings for co-ordination of each Party's designs;
 - c) the Contractor shall be responsible for this part and it shall, when the Works are completed, befit for such purposes for which the part is intended as are specified in the Contract; and
 - d) prior to the commencement of the Tests on Completion, the Contractor shall submit to the Architect the "as-built" documents and, if applicable, operation and maintenance manuals in accordance with the Specification and in sufficient detail for the Procuring Entity to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections] until these documents and manuals have been submitted to the Engineer.

4.2 Performance Security

- 4.2.1 The Contractor shall obtain (at his cost) a Performance Security for proper performance, in the amount stated in the **Special Conditions of Contract** and denominated in the currency (ies) of the Contract or in a freely convertible currency acceptable to the Procuring Entity. If an amount is not stated in the Special Conditions of Contract, this Sub-Clause shall not apply.
- 4.2.2 The Contractor shall deliver the Performance Security to the Procuring Entity within 30 days after receiving the Notification of Award and shall send a copy to the Engineer. The Performance Security shall be issued by a reputable bank selected by the Contractor and shall be in the form annexed to the Special Conditions, as stipulated by the Procuring Entity in the Special Conditions of Contract, or in another form approved by the Procuring Entity.
- 4.2.3 The Contractor shall ensure that the Performance Security is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects. If the terms of the Performance Security specify its expiry date, and the Contractor has not become entitled to receive the Performance Certificate by the date 30 days prior to the expiry date, the Contractor shall extend the validity of the Performance Security until the Works have been completed and any defects have been remedied.
- 4.2.4 The Procuring Entity shall not make a claim under the Performance Security, except for amounts to which the Procuring Entity is entitled under the Contract.
- 4.2.5 The Procuring Entity shall indemnify and hold the Contractor harmless against and from all

damages, losses and expenses (including legal fees and expenses) resulting from a claim under the Performance Security to the extent to which the Procuring Entity was not entitled to make the claim.

426 The Procuring Entity shall return the Performance Security to the Contractor within 14 days after receiving a copy of the Taking-Over Certificate.

427 Without limitation to the provisions of the rest of this Sub-Clause, whenever the Architect determines an addition or a reduction to the Contract Price as a result of a change in cost and/ or legislation, or as a result of a Variation, amounting to more than 25 percent of the portion of the Contract Price payable in a specific currency, the Contractor shall at the Architect request promptly increase, or may decrease, as the case may be, the value of the Performance Security in that currency by an equal percentage.

4.3 Contractor's Representative

431 The Contractor shall appoint the Contractor's Representative and shall give him all authority necessary to act on the Contractor's behalf under the Contract. The Contractor's Representative's Name and Address shall be provided in the **Special Conditions of Contract**.

432 Unless the Contractor's Representative **is named in the Contract**, the Contractor shall, prior to the Commencement Date, submit to the Architect for consent the name and particulars of the person the Contractor proposes to appoint as Contractor's Representative. If consent is withheld or subsequently revoked in terms of Sub-Clause 6.9 [Contractor's Personnel], or if the appointed person fails to act as Contractor's Representative, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.

433 The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Contractor's Representative or appoint a replacement.

434 The whole time of the Contractor's Representative shall be given to directing the Contractor's performance of the Contract. If the Contractor's Representative is to be temporarily absent from the Site during the execution of the Works, a suitable replacement person shall be appointed, subject to the Architect prior consent, and the Architect shall be notified accordingly.

435 The Contractor's Representative shall, on behalf of the Contractor, receive instructions under Sub-Clause 3.3 [Instructions of the Engineer].

436 The Contractor's Representative may delegate any powers, functions and authority to any competent person, and may at any time revoke the delegation. Any delegation or revocation shall not take effect until the Architect has received prior notice signed by the Contractor's Representative, naming the person and specifying the powers, functions and authority being delegated or revoked.

437 The Contractor's Representative shall be fluent in the language for communications defined in Sub-Clause 1.4 [Law and Language]. If the Contractor's Representative's delegates are not fluent in the said language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.

4.4 Sub-contractors

441 The Contractor shall not subcontract the whole of the Works. The contractor may however subcontract the works as provided in ITT 27.

442 The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents or employees, as if they were the acts or defaults of the Contractor. Unless otherwise stated in the Special Conditions:

- a) The Contractor shall not be required to obtain consent to suppliers solely of Materials, or to a subcontract for which the Subcontractor is named in the Contract;

- b) The prior consent of the Procuring Entity shall be obtained to other proposed Subcontractors;
- c) the Contractor shall give the Procuring Entity not less than 14 days' notice of the intended date of the commencement of each Subcontractor's work, and of the commencement of such work on the Site; and
- d) each subcontract shall include provisions which would entitle the Procuring Entity to require the subcontract to be assigned to the Procuring Entity under Sub-Clause 4.5 [Assignment of Benefit of Subcontract] (if or when applicable) or in the event of termination under Sub-Clause 15.2 [Termination by Procuring Entity].

4.4.3 The Contractor shall ensure that the requirements imposed on the Contractor by Sub-Clause 1.12 [Confidential Details] apply equally to each Subcontractor.

4.4.4 Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from Ethiopia to be appointed as Subcontractors.

4.5 Assignment of Benefit of Subcontract

If a Subcontractor's obligations extend beyond the expiry date of the relevant Defects Notification Period and the Engineer, prior to this date, instructs the Contractor to assign the benefit of such obligations to the Procuring Entity, then the Contractor shall do so. Unless otherwise stated in the assignment, the Contractor shall have no liability to the Procuring Entity for the work carried out by the Subcontractor after the assignment takes effect.

4.6 Co-operation

4.6.1 The Contractor shall, as specified in the Contract or as instructed by the Engineer, allow appropriate opportunities for carrying out work to:

- a) The Procuring Entity's Personnel,
- b) Any other contractors employed by the Procuring Entity, and
- c) The personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.

4.6.2 Any such instruction shall constitute a Variation if and to the extent that it causes the Contractor to suffer delays and/or to incur Unforeseeable Cost. Services for these personnel and other contractors may include the use of Contractor's Equipment, Temporary Works or access arrangements which are the responsibility of the Contractor.

4.6.3 If, under the Contract, the Procuring Entity is required to give to the Contractor possession of any foundation, structure, plant or means of access in accordance with Contractor's Documents, the Contractor shall submit such documents to the Architect in the time and manner stated in the Specification.

4.7 Setting Out of the Works

4.7.1 The Contractor shall set out the Works in relation to original points, lines and levels of reference specified in the Contract notified by the Engineer. The Contractor shall be responsible for the correct positioning of all parts of the Works, and shall rectify any error in the positions, levels, dimensions or alignment of the Works.

4.7.2 The Procuring Entity shall be responsible for any errors in these specified or notified items of reference, but the Contractor shall use reasonable efforts to verify their accuracy before they are used.

4.7.3 If the Contractor suffers delay and/or incurs Cost from executing work which was necessitated by an error in these items of reference, and an experienced contractor could not reasonably have discovered such error and avoided this delay and/or Cost, the

Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such costs accrued, which shall be included in the Contract Price.

4.7.4 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent the error could not reasonably have been discovered, and (ii) the matters described in sub-paragraphs (a) and (b) above related to these.

48 Safety Procedures

The Contractor shall:

- a) Comply with all applicable safety regulations,
- b) Take care for the safety of all persons entitled to be on the Site,
- c) Use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons,
- d) provide fencing, lighting, guarding and watching of the Works until completion and taking over under Clause 10 [Procuring Entity's Taking Over], and
- e) provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land.

49 Quality Assurance

49.1 The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. The Architect shall be entitled to audit any aspect of the system.

49.2 Details of all procedures and compliance documents shall be submitted to the Architect or information before each design and execution stage is commenced. When any document of a technical nature is issued to the Engineer, evidence of the prior approval by the Contractor itself shall be apparent on the document itself.

Compliance with the quality assurance system shall not relieve the Contractor of any of his duties, obligations or responsibilities under the Contract.

4.10 Site Data

4.10.1 The Procuring Entity shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Procuring Entity's possession on sub-surface and hydrological conditions at the Site, including environmental aspects. The Procuring Entity shall similarly make available to the Contractor all such data which come into the Procuring Entity's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.

4.10.2 To the extent which was practicable (taking account of cost and time), the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Tender or Works. To the same extent, the Contractor shall be deemed to have inspected and examined the Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Tender as to all relevant matters, including (without limitation):

- a) The form and nature of the Site, including sub-surface conditions,
- b) the hydrological and climatic conditions,
- c) the extent and nature of the work and Goods necessary for the execution and

- completion of the Works and the remedying of any defects,
- d) the Laws, procedures and labour practices of Kenya, and
- e) the Contractor's requirements for access, accommodation, facilities, personnel, power, transport, water and other services.

4.11 Sufficiency of the Accepted Contract Amount

4.11.1 The Contractor shall be deemed to:

- a) Have satisfied itself as to the correctness and sufficiency of the Accepted Contract Amount, and
- b) have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters referred to in Sub-Clause 4.10 [Site Data].

4.11.2 Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper execution and completion of the Works and the remedying of any defects.

4.12 Unforeseeable Physical Conditions

4.12.1 In this Sub-Clause, "physical conditions" means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions but excluding climatic conditions.

4.12.2 If the Contractor encounters adverse physical conditions which he considers to have been Unforeseeable, the Contractor shall give notice to the Architect as soon as practicable.

4.12.3 This notice shall describe the physical conditions, so that they can be inspected by the Architect and shall set out the reasons why the Contractor considers them to be Unforeseeable. The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Architect may give. If an instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply.

4.12.4 If and to the extent that the Contractor encounters physical conditions which are Unforeseeable, gives such a notice, and suffers delay and/or incurs Cost due to these conditions, the Contractor shall be entitled subject to notice under Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such Cost, which shall be included in the Contract Price.

4.12.5 Upon receiving such notice and inspecting and/or investigating these physical conditions, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent these physical conditions were Unforeseeable, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.

4.12.6 However, before additional Cost is finally agreed or determined under sub-paragraph (ii), the Architect may also review whether other physical conditions in similar parts of the Works (if any) were more favorable than could reasonably have been foreseen when the Contractor submitted the Tender. If and to the extent that these more favorable conditions were encountered, the Architect may proceed in accordance with Sub-Clause 3.5

[Determinations] to agree or determine the reductions in Cost which were due to these conditions, which may be included (as deductions) in the Contract Price and Payment Certificates. However, the net effect of all adjustments under sub-paragraph (b) and all these reductions, for all the physical conditions encountered in similar parts of the Works, shall not result in a net reduction in the Contract Price.

- 4.12.7 The Architect shall take account of any evidence of the physical conditions foreseen by the Contractor when submitting the Tender, which shall be made available by the Contractor, but shall not be bound by the Contractor's interpretation of any such evidence.

4.13 Rights of Way and Facilities

Unless otherwise specified in the Contract the Procuring Entity shall provide effective access to and possession of the Site including special and/or temporary rights-of-way which are necessary for the Works. The Contractor shall obtain, at his risk and cost, any additional rights of way or facilities outside the Site which he may require for the purposes of the Works.

4.14 Avoidance of Interference

- 4.14.1 The Contractor shall not interfere unnecessarily or improperly with:
- a) The convenience of the public, or
 - b) The access to and use and occupation of all roads and foot paths, irrespective of whether they are public or in the possession of the Procuring Entity or of others.
- 4.14.2 The Contractor shall indemnify and hold the Procuring Entity harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from any such unnecessary or improper interference.

4.15 Access Route

- 4.15.1 The Contractor shall be deemed to have been satisfied as to the suitability and availability of access routes to the Site at Base Date. The Contractor shall use reasonable efforts to prevent any road or bridge from being damaged by the Contractor's traffic or by the Contractor's Personnel. These efforts shall include the proper use of appropriate vehicles and routes.
- 4.15.2 Except as otherwise stated in these Conditions:
- a) The Contractor shall (as between the Parties) be responsible for any maintenance which may be required for his use of access routes;
 - b) the Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions;
 - c) the Procuring Entity shall not be responsible for any claims which may arise from the use or otherwise of any access route;
 - d) the Procuring Entity does not guarantee the suitability or a availability of particular access routes; and
 - e) Costs due to non-suitability or non-availability, for the use required by the Contractor, of access routes shall be borne by the Contractor.

4.16 Transport of Goods

Unless otherwise stated in the Special Conditions:

- a) the Contractor shall give the Architect not less than 21 days' notice of the date on which any Plant or a major item of other Goods will be delivered to the Site;
- b) the Contractor shall be responsible for packing, loading, transporting, receiving,

- unloading, storing and protecting all Goods and other things required for the Works; and
- c) the Contractor shall indemnify and hold the Procuring Entity harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from the transport of Goods and shall negotiate and pay all claims arising from their transport.

4.17 Contractor's Equipment

The Contractor shall be responsible for all Contractor's Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any major items of Contractor's Equipment without the consent of the Engineer. However, consent shall not be required for vehicles transporting Goods or Contractor's Personnel off Site.

4.18 Protection of the Environment

- 4.18.1 The contractor shall comply with the applicable environmental laws, regulations and policies.
- 4.18.2 The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.
- 4.18.3 The Contractor shall ensure that emissions, surfaced is charges and effluent from the Contractor's activities shall not exceed the values stated in the Specification or prescribed by applicable Laws.

4.19 Electricity, Water and Gas

- 4.19.1 The Contractor shall, except as stated below, be responsible for the provision of all power, water and other services he may require for his construction activities and to the extent defined in the Specifications, for the tests.
- 4.19.2 The Contractor shall be entitled to use for the purposes of the Works such supplies of electricity, water, gas and other services as may be available on the Site and of which details and prices are given in the Specifications. The Contractor shall, at his risk and cost, provide any apparatus necessary for his use of these services and for measuring the quantities consumed.
- 4.19.3 The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Architect in accordance with Sub-Clause 20.2 [Procuring Entity's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Procuring Entity.

4.20 Procuring Entity's Equipment and Free-Issue Materials

- 4.20.1 The Procuring Entity shall make the Procuring Entity's Equipment (if any) available for the use of the Contractor in the execution of the Works in accordance with the details, arrangements and prices stated in the Specification. Unless otherwise stated in the Specification:
 - a) The Procuring Entity shall be responsible for the Procuring Entity's Equipment, except that
 - b) the Contractor shall be responsible for each item of Procuring Entity's Equipment whilst any of the Contractor's Personnel is operating it, driving it, directing it or in possession or control of it.
- 4.20.1 The appropriate quantities and the amounts due (at such stated prices) for the use of

Procuring Entity's Equipment shall be agreed or determined by the Architect in accordance with Sub-Clause 20.2 [Procuring Entity's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Procuring Entity.

- 4.20.2 The Procuring Entity shall supply, free of charge, the "free-issue materials" (if any) in accordance with the details stated in the Specification. The Procuring Entity shall, at his risk and cost, provide these materials at the time and place specified in the Contract. The Contractor shall then visually inspect them and shall promptly give notice to the Architect of any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, the Procuring Entity shall immediately rectify the notified shortage, defect or default.
- 4.20.3 After this visual inspection, the free-issue materials shall come under the care, custody and control of the Contractor. The Contractor's obligations of inspection, care, custody and control shall not relieve the Procuring Entity of liability for any shortage, defect or default not apparent from a visual inspection.

4.21 Progress Reports

- 4.21.1 Unless otherwise stated in the Special Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Architect in six copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within 7 days after the last day of the period to which it relates.
- 4.21.2 Reporting shall continue until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works. Each report shall include:
- a) charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
 - b) photographs showing the status of manufacture and of progress on the Site;
 - c) for the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:
 - i) commencement of manufacture,
 - ii) Contractor's inspections,
 - iii) tests, and
 - iv) shipment and arrival at the Site;
 - d) the details described in Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment];
 - e) copies of quality assurance documents, test results and certificates of Materials;
 - f) list of notices given under Sub-Clause 20.2 [Procuring Entity's Claims] and notices given under Sub-Clause 20.1 [Contractor's Claims];
 - g) safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and
 - h) comparison so factual and planned progress, with details of any events or circumstances which may jeopardize the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.

4.22 Security of the Site

Unless otherwise stated in the Special Conditions:

- a) The Contractor shall be responsible for keeping unauthorized persons off the Site, and

- b) authorized persons shall be limited to the Contractor's Personnel and the Procuring Entity's Personnel; and to any other personnel notified to the Contractor, by the Procuring Entity or the Engineer, as authorized personnel of the Procuring Entity's other contractors on the Site.

4.23 Contractor's Operations on Site

- 4231 The Contractor shall confine his operations to the Site, and to any additional areas which may be obtained by the Contractor and agreed by the Architect as additional working areas. The Contractor shall take all necessary precautions to keep Contractor's Equipment and Contractor's Personnel within the Site and these additional areas, and to keep them off adjacent land.
- 4232 During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction and shall store or dispose of any Contractor's Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish and Temporary Works which are no longer required.
- 4233 Upon the issue of a Taking-Over Certificate, the Contractor shall clear away and remove, from that part of the Site and Works to which the Taking-Over Certificate refers, all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works. The Contractor shall leave that part of the Site and the Works in a clean and safe condition. However, the Contractor may retain on Site, during the Defects Notification Period, such Goods as are required for the Contractor to fulfil obligations under the Contract.

4.24 Fossils

- 4241 All fossils, coins, articles of value or antiquity, and structures and other remains or items of geological or archaeological interest found on the Site shall be placed under the care and authority of the Procuring Entity. The Contractor shall take reasonable precautions to prevent Contractor's Personnel or other persons from removing or damaging any of these findings.
- 4242 The Contractor shall, upon discovery of any such finding, promptly give notice to the Engineer, who shall issue instructions for dealing with it. If the Contractor suffers delay and/or incurs Cost from complying with the instructions, the Contractor shall give a further notice to the Architect and shall be entitled subject to Sub- Clause 20.1 [Contractor's Claims] to:
 - a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) payment of any such Cost, which shall be included in the Contract Price.After receiving this further notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

5. NOMINATED SUBCONTRACTORS

5.1 Definition of "nominated Subcontractor"

In this Contract, "nominated Subcontractor" means a Subcontractor:

- a) Who is nominated by the Procuring Entity, or
- b) Contractor has nominated as a Subcontractor subject to Sub-Clause 5.2 [Objection to Notification].

5.2 Objection to Nomination

The Contractor shall not be under any obligation to employ a nominated Subcontractor against whom the Contractor raises reasonable objection by notice to the Procuring Entity as soon as practicable, with supporting particulars. An objection shall be deemed reasonable

if it arises from (among other things) any of the following matters, unless the Procuring Entity agrees in writing to indemnify the Contractor against and from the consequences of the matter:

- a) there are reasons to believe that the Subcontractor does not have sufficient competence, resources or financial strength;
- b) the nominated Subcontractor does not accept to indemnify the Contractor against and from any negligence or misuse of Goods by the nominated Subcontractor, his agents and employees; or
- c) the nominated Subcontractor does not accept to enter into a subcontract which specifies that, for the subcontracted work (including design, if any), the nominated Subcontractor shall:
 - i) undertake to the Contractor such obligations and liabilities as will enable the Contractor to discharge his obligations and liabilities under the Contract;
 - ii) indemnify the Contractor against and from all obligations and liabilities arising under or in connection with the Contract and from the consequences of any failure by the Subcontractor to perform these obligations or to fulfil these liabilities, and
 - iii) be paid only if and when the Contractor has received from the Procuring Entity payments for sums due under the Subcontract referred to under Sub-Clause 5.3 [Payment to nominated Subcontractors].

5.3 Payments to nominated Subcontractors

The Contractor shall pay to the nominated Subcontractor the amounts shown on the nominated Subcontractor's invoices approved by the Contractor which the Architect certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with sub-paragraph (b) of Sub-Clause 13.6 [Provisional Sums], except as stated in Sub-Clause 5.4 [Evidence of Payments].

5.4 Evidence of Payments

5.4.1 Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Architect may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:

- (a) Submits this reasonable evidence to the Engineer, or
- (b)
 - i) Satisfies the Architect in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and
 - ii) Submits to the Architect reasonable evidence that the nominated Subcontractor has been notified of the Contractor's entitlement, then the Procuring Entity may (at his sole discretion) pay, direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Procuring Entity, the amount which the nominated Subcontractor was directly paid by the Procuring Entity.

6 STAFF AND LABOR

6.1 Engagement of Staff and Labor

Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labor, local or otherwise, and for their payment, feeding, transport, and, when appropriate, housing. The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labor with appropriate qualifications and experience from sources within Ethiopia.

6.2 Rates of Wages and Conditions of Labor

6.2.1 The Contractor shall pay rates of wages, and observe conditions of labor, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by Procuring Entity's whose trade or industry is similar to that of the Contractor.

6.2.2 The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in Ethiopia in respect of such of their salaries, wages, allowances and any benefits as are subject to tax under the Laws of Ethiopia for the time being in force, and the Contractor shall perform such duties in regard to such deductions there of as may be imposed on him by such Laws.

6.3 Persons in the Service of Procuring Entity

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst the Procuring Entity's Personnel.

6.4 Labor Laws

The Contractor shall comply with all the relevant labour Laws applicable to the Contractor's Personnel, including Laws relating to their employment, employment of children, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights. The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

6.5 Working Hours

No work shall be carried out on the Site on locally recognized days of rest, or outside the normal working hours stated in the **Special Conditions of Contract**, unless:

- a) Otherwise stated in the Contract,
- b) The Architect gives consent, or
- c) The work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer, provided that work done outside the normal working hours shall be considered and paid for as overtime.

6.6 Facilities for Staff and Labor

Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities on site for the Contractor's Personnel. The Contractor shall also provide facilities for the Procuring Entity's Personnel as stated in the Specifications. The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

6.7 Health and Safety

6.7.1 The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Procuring Entity's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

6.72 The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.

6.73 The Contractor shall send, to the Engineer, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Architect may reasonably require.

6.74 The Contractor shall conduct an awareness programme on HIV and other sexually transmitted diseases via an approved service provider and shall undertake such other measures taken to reduce the risk of the transfer of these diseases between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

6.8 Contractor's Superintendence

6.8.1 Throughout the execution of the Works, and as long thereafter as is necessary to fulfil the Contractor's obligations, the Contractor shall provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the work.

6.8.2 Superintendence shall be given by a sufficient number of persons having adequate knowledge of the language for communications (defined in Sub-Clause 1.4 [Law and Language]) and of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works.

6.9 Contractor's Personnel

6.9.1 The Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractor's Key personnel shall be named in the Special Conditions of Contract. The Architect may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative if applicable, who:

- a) Persists in any misconduct or lack of care,
- b) Carries out duties in competently or negligently,
- c) fails to conform with any provisions of the Contract,
- d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment, or
- e) based on reasonable evidence, is determined to have engaged in Fraud and Corruption during the execution of the Works.

6.9.2 If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

6.10 Records of Contractor's Personnel and Equipment

The Contractor shall submit, to the Engineer, details showing the number of each class of Contractor's Personnel and of each type of Contractor's Equipment on the Site. Details shall be submitted each calendar month, in a form approved by the Engineer, until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.

6.11 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful,

riotous or disorderly conduct by or amongst the Contractor's Personnel, and to preserve peace and protection of persons and property on and near the Site.

6.12 Foreign Personnel

6.12.1 The Contractor shall not employ foreign personnel unless the contractor demonstrates that there are no Kenyans with the required skills.

6.12.2 The Contractor shall be responsible for the return of any foreign personnel to the place where they were recruited or to their domicile. In the event of the death in Kenya of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial.

6.13 Supply of Water

The Contractor shall, having regard to local conditions, provide on the Site adequate supply of drinking and other water for the use of the Contractor's Personnel.

6.14 Measures against Insect and Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce the danger to their health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.

6.15 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Laws of Kenya, onsite, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal thereof by Contractor's Personnel.

6.16 Prohibition of Forced or Compulsory Labour

The Contractor shall not employ forced labor, which consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements.

6.17 Prohibition of Harmful Child Labor

The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where the relevant labour laws of Kenya have provisions for employment of minors, the Contractor shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work.

6.18 Employment Records of Workers

The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the Engineer. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment].

6.19 Workers' Organizations

The Contractor shall comply with the relevant labor laws that recognize workers' rights to form and to join workers' organizations of their choosing without interference.

6.20 Non-Discrimination and Equal Opportunity

The Contractor shall base the labour employment on the principle of equal opportunity and fair treatment and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, promotion, termination of employment, retirement, and discipline.

7. PLANT, MATERIALS AND WORKMANSHIP

7.1 Manner of Execution

The Contractor shall carry out the manufacture/assemble of plant, the production and manufacture of Materials, and all other execution of the Works:

- a) In the manner (if any) specified in the Contract,
- b) in a proper workman like and careful manner, in accordance with recognized good practice, and
- c) with properly equipped facilities and non-hazardous Materials, except as otherwise specified in the Contract.

7.2 Samples

The Contractor shall submit the following samples of Materials, and relevant information, to the Architect for consent prior to using the Materials in or for the Works:

- a) manufacturer's standard samples of Materials and samples specified in the Contract, all at the Contractor's cost, and
- b) additional samples instructed by the Architect as a Variation.

Each sample shall be labeled as to origin and intended use in the Works.

7.3 Inspection

7.3.1 The Procuring Entity's Personnel shall at all reasonable times:

- a) Have full access to all parts of the Site and to all places from which natural Materials are being obtained, and
- b) during production, manufacture and construction (at the Site and elsewhere), be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of manufacture of Plant and production and manufacture of Materials.

7.3.2 The Contractor shall give the Procuring Entity's Personnel full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility.

7.3.3 The Contractor shall give notice to the Architect whenever any work is ready and before it is covered up, put out of sight, or packaged for storage or transport. The Architect shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or promptly give notice to the Contractor that the Architect does not require to do so. If the Contractor fails to give the notice, he shall, if and when required by the Engineer, uncover the work and there after reinstate and make good, all at the Contractor's cost.

7.4 Testing

7.4.1 This Sub-Clause shall apply to all tests specified in the Contract.

- 742 Except as otherwise specified in the Contract, the Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, fuel, consumables, instruments, labor, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently. The Contractor shall agree, with the Engineer, the time and place or the specified testing of any Plant, Materials and other parts of the Works.
- 743 The Architect may, under Clause 13 [Variations and Adjustments], vary the location or details of specified tests, or instruct the Contractor to carry out additional tests. If these varied or additional tests show that the tested Plant, Materials or workmanship is not in accordance with the Contract, the cost of carrying out this Variation shall be borne by the Contractor, notwithstanding other provisions of the Contract.
- 744 The Architect shall give the Contractor not less than 24 hours' notice of the Architect intention to attend the tests. If the Architect does not attend at the time and place agreed, the Contractor may proceed with the tests, unless otherwise instructed by the Engineer, and the tests shall then be deemed to have been made in the Architect presence.
- 745 If the Contractor suffers delay and/ or incurs Cost from complying with these instructions or as a result of a delay for which the Procuring Entity is responsible, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) payment of any such Cost-plus profit, which shall be included in the Contract Price.
- 746 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- 747 The Contractor shall promptly forward to the Architect duly certified reports of the tests. When the specified tests have been passed, the Architect shall endorse the Contractor's test certificate, or issue a certificate to him, to that effect. If the Architect has not attended the tests, he shall be deemed to have accepted the readings as accurate.

7.5 Rejection

- 751 If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the Architect may reject the Plant, Materials or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item complies with the Contract.
- 752 If the Architect requires this Plant, Materials or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If the rejection and retesting cause the Procuring Entity to incur additional costs, the Contractor shall subject to Sub-Clause 20.2 [Procuring Entity's Claims] pay these costs to the Procuring Entity.

7.6 Remedial Work

- 761 Notwithstanding any previous test or certification, the Architect may instruct the Contractors:
- a) Remove from the Site and replace any Plant or Materials which is not in accordance with the Contract,
 - b) remove and re-execute any other work which is not in accordance with the Contract, and
 - c) execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseeable event or otherwise.
- 762 The Contractor shall comply with the instruction within a reasonable time, which shall be the time (if any) specified in the instruction, or immediately if urgency is specified under sub-paragraph (c).

- 7.6.3 If the Contractor fails to comply with the instruction, the Procuring Entity shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to Sub-Clause 20.2 [Procuring Entity's Claims] pay to the Procuring Entity all costs arising from this failure.
- 7.6.4 If the contractor repeatedly delivers defective work, the Procuring Entity may consider termination in accordance with Clause 15.

7.7 Ownership of Plant and Materials

Except as otherwise provided in the Contract, each item of Plant and Materials shall become the property of the Procuring Entity at whichever is the earlier of the following times, free from liens and other encumbrances:

- a) When it is incorporated in the Works;
- b) when the Contractor is paid the corresponding value of the Plant and Materials under Sub-Clause 8.10 [Payment for Plant and Materials in Event of Suspension].

7.8 Royalties

Unless otherwise stated in the Specification, the Contractor shall pay all royalties, rents and other payments for:

- a) Natural materials obtained from outside the Site, and
- b) the disposal of material from demolitions and excavations and of other surplus material (whether natural or man-made), except to the extent that disposal areas within the Site are specified in the Contract.

8 COMMENCEMENT, DELAYS AND SUSPENSION

8.1 Commencement of Works

- 8.1.1 Except as otherwise specified in the Special Conditions of Contract, the Commencement Date shall be the date at which the following precedent conditions have all been fulfilled and the Architect notification recording the agreement of both Parties on such fulfilment and instructing to commence the Work is received by the Contractor:

- a) Signature of the Contract Agreement by both Parties, and if required, approval of the Contract by relevant authorities of Kenya;
- b) except if otherwise specified in the Special Conditions of Contract, effective access to and possession of the Site given to the Contractor together with such permission(s) under (a) of Sub-Clause 1.13 [Compliance with Laws] as required for the commencement of the Works.
- c) Receipt by the Contractor of the Advance Payment under Sub-Clause 14.2 [Advance Payment] provided that the corresponding bank guarantee has been delivered by the Contractor.

- 8.1.2 If the said Architect instruction is not received by the Contractor within 180 days from his receipt of the Letter of Acceptance, the Contractor shall be entitled to terminate the Contract under Sub-Clause 16.2 [Termination by Contractor].

- 8.1.3 The Contractor shall commence the execution of the Works as soon as is reasonably practicable after the Commencement Date and shall then proceed with the Works with due expedition and without delay.

8.2 Time for Completion

The Contractor shall complete the whole of the Works, and each Section (if any), within the Time for Completion for the Works or Section (as the case may be), including:

- a) Achieving the passing of the tests on Completion, and
- b) completing all work which is stated in the Contract as being required for the Works or Section to be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections].

8.3 Programme

- 8.3.1 The Contractor shall submit a detailed time programme to the Architect within 14 days after receiving the notice under Sub-Clause 8.1 [Commencement of Works]. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor's obligations. Each programme shall include:
- a) The order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage of design (if any), Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing,
 - b) each of these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
 - c) the sequence and timing of inspections and tests specified in the Contract, and
 - d) a supporting report which includes:
 - i) a general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works, and
 - ii) details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.
- 8.3.2 Unless the Engineer, within 14 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Contract. The Procuring Entity's Personnel shall be entitled to rely upon the programme when planning their activities.
- 8.3.3 The Contractor shall promptly give notice to the Architect of specific probable future events or circumstances which may adversely affect the work, increase the Contract Price or delay the execution of the Works.
- 8.3.4 If, at any time, the Architect gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Contractor to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Architect in accordance with this Sub-Clause.

8.4 Extension of Time for Completion

- 8.4.1 The Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to an extension of the Time for Completion if and to the extent that completion for the purposes of Sub-Clause 10.1 [Taking Over of the Works and Sections] is or will be delayed by any of the following causes:
- a) a Variation (unless an adjustment to the Time for Completion has been agreed under Sub-Clause 13.2 [Variation Procedure]) or other substantial change in the quantity of an item of work included in the Contract,
 - b) a cause of delay giving an entitlement to extension of time under a Sub-Clause of these Conditions,
 - c) exceptionally adverse climatic conditions,
 - d) Unforeseeable shortages in the availability of personnel or Goods caused by epidemic or governmental actions, or
 - e) any delay, impediment or prevention caused by or attributable to the Procuring Entity, the Procuring Entity's Personnel, or the Procuring Entity's other contractors.

8.42 If the Contractor considers itself to be entitled to an extension of the Time for Completion, the Contractor shall give notice to the Architect in accordance with Sub-Clause 20.1 [Contractor's Claims]. When determining each extension of time under Sub-Clause 20.1, the Architect shall review previous determinations and may increase, but shall not decrease, the total extension of time.

8.5 Delays Caused by Authorities

If the following conditions apply, namely:

- a) The Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in Kenya,
- b) These authorities delay or disrupt the Contractor's work, and

the delay or disruption was Unforeseeable, then this delay or disruption will be considered as a cause of delay under sub-paragraph (b) of Sub-Clause 8.4 [Extension of Time for Completion].

8.6 Rate of Progress

8.61 If, at any time:

- a) Actual progress is too slow to complete within the Time for Completion, and/or
- b) Progress has fallen (or will fall) behind the current programme under Sub-Clause 8.3 [Programme], other than as a result of a cause listed in Sub-Clause 8.4 [Extension of Time for Completion], then the Architect may instruct the Contractor to submit, under Sub-Clause 8.3 [Programme], a revised programme and supporting report describing the revised methods which the Contractor proposes to adopt in order to expedite progress and complete within the Time for Completion.

8.62 Unless the Architect notifies otherwise, the Contractor shall adopt these revised methods, which may require increases in the working hours and/or in the numbers of Contractor's Personnel and/or Goods, at the risk and cost of the Contractor. If these revised methods cause the Procuring Entity to incur additional costs, the Contractor shall subject to notice under Sub-Clause 20.2 [Procuring Entity's Claims] pay these costs to the Procuring Entity, in addition to delay damages (if any) under Sub-Clause 8.7 below.

8.63 Additional costs of revised methods including acceleration measures, instructed by the Architect to reduce delays resulting from causes listed under Sub-Clause 8.4 [Extension of Time for Completion] shall be paid by the Procuring Entity, without generating, however, any other additional payment benefit to the Contractor.

8.7 Delay Damages

8.71 If the Contractor fails to comply with Sub-Clause 8.2 [Time for Completion], the Contractor shall subject to notice under Sub-Clause 20.2 [Procuring Entity's Claims] pay delay damages to the Procuring Entity for this default. These delay damages shall be the sum stated in the **Special Conditions of Contract**, which shall be paid for everyday which shall elapse between the relevant Time for Completion and the date stated in the taking-Over Certificate. However, the total amount due under this Sub-Clause shall not exceed the maximum amount of delay damages (if any) stated in the Special Conditions of Contract.

8.72 These delay damages shall be the only damages due from the Contractor for such default, other than in the event of termination under Sub-Clause 15.2 [Termination by Procuring Entity] prior to completion of the Works. These damages shall not relieve the Contractor from his obligation to complete the Works, or from any other duties, obligations or responsibilities which he may have under the Contract.

8.8 Suspension of Work

- 881 The Architect may at any time instruct the Contractor to suspend progress of part or all of the Works. During such suspension, the Contractor shall protect, store and secure such part or the Works against any deterioration, loss or damage.
- 882 The Architect may also notify the cause for the suspension. If and to the extent that the cause is notified and is the responsibility of the Contractor, the following Sub-Clauses 8.9, 8.10 and 8.11 shall not apply.

8.9 Consequences of Suspension

- 891 If the Contractor suffers delay and/or incurs Cost from complying with the Architect instructions under Sub- Clause 8.8 [Suspension of Work] and/or from resuming the work, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) Payment of any such Cost, which shall be included in the Contract Price.
- 892 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- 893 The Contractor shall not be entitled to an extension of time for, or to payment of the Cost incurred in, making good the consequences of the Contractor's faulty design, workmanship or materials, or of the Contractor's failure to protect, store or secure in accordance with Sub-Clause 8.8 [Suspension of Work].

8.10 Payment for Plant and Materials in Event of Suspension

The Contractor shall be entitled to payment of the value (as at the date of suspension) of Plant and/ or Materials which have not been delivered to Site, if:

- a) The work on Plant or delivery of Plant and/ or Materials has been suspended for more than 30 days, and
- b) the Contractor has marked the Plant and/or Materials as the Procuring Entity's property in accordance with the Architect instructions.

8.11 Prolonged Suspension

If the suspension under Sub-Clause 8.8 [Suspension of Work] has continued for more than 84 days, the Contractor may request the Architect permission to proceed. If the Architect does not give permission within 30 days after being requested to do so, the Contractor may, by giving notice to the Engineer, treat the suspension as an omission under Clause 13 [Variations and Adjustments] of the affected part of the Works. If the suspension affects the whole of the Works, the Contractor may give notice of termination under Sub-Clause 16.2 [Termination by Contractor].

8.12 Resumption of Work

After the permission or instruction to proceed is given, the Contractor and the Architect shall jointly examine the Works and the Plant and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Plant or Materials, which has occurred during the suspension after receiving from the Architect and instruction to this effect under Clause 13 [Variations and Adjustments].

9. TESTS ON COMPLETION

9.1 Contractor's Obligations

- 9.1.1 The Contractor shall carry out the Tests on Completion in accordance with this Clause and Sub-Clause 7.4 [Testing], after providing the documents in accordance with sub-paragraph (d) of Sub-Clause 4.1 [Contractor's General Obligations].
- 9.1.2 The Contractor shall give to the Architect not less than 21 days' notice of the date after which the Contractor will be ready to carry out each of the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within 14 days after this date, on such day or days as the Architect shall instruct.
- 9.1.3 In considering the results of the Tests on Completion, the Architect shall make allowances for the effect of any use of the Works by the Procuring Entity on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed any Tests on Completion, the Contractor shall submit a certified report of the results of these Tests to the Engineer.

9.2 Delayed Tests

- 9.2.1 If the Tests on Completion are being unduly delayed by the Procuring Entity, Sub-Clause 7.4 [Testing] (fifth paragraph) and/ or Sub-Clause 10.3 [Interference with Tests on Completion] shall be applicable.
- 9.2.2 If the Tests on Completion are being unduly delayed by the Contractor, the Architect may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Engineer.
- 9.2.3 If the Contractor fails to carry out the Tests on Completion within the period of 21 days, the Procuring Entity's Personnel may proceed with the Tests at the risk and cost of the Contractor. The Tests on Completion shall then be deemed to have been carried out in the presence of the Contractor and the results of the Tests shall be accepted as accurate.

9.3 Retesting of related works

If the Works, or a Section, fail to pass the Tests on Completion, Sub-Clause 7.5 [Rejection] shall apply, and the Architect or the Contractor may require the failed Tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions.

9.4 Failure to Pass Tests on Completion

- 9.4.1 If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 [Retesting], the Architect shall be entitled to:
- a) Order further repetition of Tests on Completion under Sub-Clause 9.3; or
 - b) if the failure deprives the Procuring Entity of substantially the whole benefit of the Works or Section, reject the Works or Section (as the case may be), in which event the Procuring Entity shall have the same remedies as are provided in sub-paragraph (c) of Sub-Clause 11.4 [Failure to Remedy Defects].

10. PROCURING ENTITY'S TAKING OVER

10.1 Taking Over of the Works and Sections

- 10.1.1 Except as stated in Sub-Clause 9.4 [Failure to Pass Tests on Completion], the Works shall be taken over by the Procuring Entity when (i) the Works have been completed in accordance with the Contract, including the matters described in Sub-Clause 8.2 [Time for Completion] and except as allowed in sub-paragraph (a) below, and (ii) a Taking-Over Certificate for the

Works has been issued, or is deemed to have been issued in accordance with this Sub-Clause.

10.12 The Contractor may apply by notice to the Architect for a Taking-Over Certificate not earlier than 14 days before the Works will, in the Contractor's opinion, be complete and ready for taking over. If the Works are divided into Sections, the Contractor may similarly apply for a Taking-Over Certificate for each Section.

10.13 The Architect shall, within 30 days after receiving the Contractor's application:

- a) Issue the Taking-Over Certificate to the Contractor, stating the date on which the Works or Section were completed in accordance with the Contract, except for any minor outstanding work and defects which will not substantially affect the use of the Works or Section for their intended purpose (either until or whilst this work is completed and these defects are remedied); or
- b) reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.

10.14 If the Architect fails either to issue the Taking-Over Certificate or to reject the Contractor's application within the period of 30 days, and if the Works or Section (as the case may be) are substantially in accordance with the Contract, the Taking-Over Certificate shall be deemed to have been issued on the first day of that period.

10.2 Taking Over of Parts of the Works

10.21 The Architect may, at the sole discretion of the Procuring Entity, issue a Taking-Over Certificate for any part of the Permanent Works.

10.22 The Procuring Entity shall not use any part of the Works (other than as a temporary measure which is either specified in the Contract or agreed by both Parties) unless and until the Architect has issued a Taking-Over Certificate for this part. However, if the Procuring Entity does use any part of the Works before the Taking-Over Certificate is issued:

- a) The part which is used shall be deemed to have been taken over as from the date on which it is used,
- b) the Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Procuring Entity, and
- c) if requested by the Contractor, the Architect shall issue a Taking-Over Certificate for this part.

10.23 After the Architect has issued a Taking-Over Certificate for a part of the Works, the Contractor shall be given the earliest opportunity to take such steps as may be necessary to carry out any outstanding Tests on Completion. The Contractor shall carry out these Tests on Completion as soon as practicable before the expiry date of the relevant Defects Notification Period.

10.24 If the Contractor incurs Cost as a result of the Procuring Entity taking over and/or using a part of the Works, other than such use as is specified in the Contract agreed by the Contractor, the Contractor shall (i) give notice to the Architect and (ii) be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to payment of any such accrued costs, which shall be included in the Contract Price. After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this accrued cost.

10.25 If a Taking-Over Certificate has been issued for a part of the Works (other than a Section), the delay damages thereafter for completion of the remainder of the Works shall be reduced. Similarly, the delay damages for the remainder of the Section (if any) in which this part is included shall also be reduced. For any period of delay after the date stated in this Taking-Over Certificate, the proportional reduction in these delay damages shall be calculated as the proportion which the value of the part so certified bears to the value of the Works or Section (as the case may be) as a whole. The Architect shall proceed in

accordance with Sub-Clause 3.5 [Determinations] to agree or determine these proportions. The provisions of this paragraph shall only apply to the daily rate of delay damages under Sub-Clause 8.7 [Delay Damages] and shall not affect the maximum amount of these damages.

10.3 Interference with Tests on Completion

- 103.1 If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which the Procuring Entity is responsible, the Procuring Entity shall be deemed to have taken over the Works or Section (as the case may be) on the date when the Tests on Completion would otherwise have been completed.
- 103.2 The Architect shall then issue a Taking-Over Certificate accordingly, and the Contractor shall carry out the Tests on Completion as soon as practicable, before the expiry date of the Defects Notification Period. The Architect shall require the Tests on Completion to be carried out by giving 14 days' notice and in accordance with the relevant provisions of the Contract.
- 103.3 If the Contractor suffers delay and/or incurs Cost as a result of this delay in carrying out the Tests on Completion, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) payment of any such accrued costs, which shall be included in the Contract Price.
- 103.4 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

10.4 Surfaces Requiring Reinstatement

Except as otherwise stated in a Taking-Over Certificate, a certificate for a Section or part of the Works shall not be deemed to certify completion of any ground or other surfaces requiring reinstatement.

11.0 DEFECTS LIABILITY

11.1 Completion of Outstanding Work and Remedying Defects

- 11.1.1 In order that the Works and Contractor's Documents, and each Section, shall be in the condition required by the Contract (fair wear and tear excepted) by the expiry date of the relevant Defects Notification Period or as soon as practicable thereafter, the Contractor shall:
- a) complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such reasonable time as is instructed by the Engineer, and
 - b) execute all work required to remedy defects or damage, as may be notified by (or on behalf of) the Procuring Entity on or before the expiry date of the Defects Notification Period for the Works or Section (as the case may be).
- 11.1.2 If a defect appears or damage occurs, the Contractor shall be notified accordingly by the Engineer.

11.2 Cost of Remedying Defects

- 11.2.1 All work referred to in sub-paragraph (b) of Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:
- a) Any design for which the Contractor is responsible,
 - b) Plant, Materials or workmanship not being in accordance with the Contract, or

c) Failure by the Contractor to comply with any other obligation.

11.2.2 If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Procuring Entity, and Sub-Clause 13.2 [Variation Procedure] shall apply.

11.3 Extension of Defects Notification Period

11.3.1 The Procuring Entity shall be entitled subject to Sub-Clause 20.2 [Procuring Entity's Claims] to an extension of the Defects Notification Period for the Works or a Section if and to the extent that the Works, Section or a major item of Plant (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a defect or by reason of damage attributable to the Contractor. However, a Defects Notification Period shall not be extended by more than two years.

11.3.2 If delivery and/ or erection of Plant and/ or Materials was suspended under Sub-Clause 8.8 [Suspension of Work] or Sub-Clause 16.1 [Contractor's Entitlement to Suspend Work], the Contractor's obligations under this Clause shall not apply to any defects or damage occurring more than two years after the Defects Notification Period for the Plant and/ or Materials would otherwise have expired.

11.4 Failure to Remedy Defects

11.4.1 If the Contractor fails to remedy any defect or damage within a reasonable time, a date may be fixed by the Engineer, on or by which the defect or damage is to be remedied. The Contractor shall be given reasonable notice of this date.

11.4.2 If the Contractor fails to remedy the defect or damage by this notified date and this remedial work was to be executed at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Procuring Entity may (at his option):

- (a) Carry out the work itself or by others, in a reasonable manner and at the Contractor's cost, but the Contractor shall have no responsibility for this work; and the Contractor shall subject to Sub-Clause 20.2 [Procuring Entity's Claims] pay to the Procuring Entity the costs reasonably incurred by the Procuring Entity in remedying the defect or damage;
- (b) Require the Architect to agree or determine a reasonable reduction in the Contract Price in accordance with Sub-Clause 3.5 [Determinations]; or

if the defect or damage deprives the Procuring Entity of substantially the whole benefit of the Works or any major part of the Works, terminate the Contracts a whole, or in respect of such major part which cannot be put to the intended use. Without prejudice to any other rights, under the Contractor otherwise, the Procuring Entity shall then be entitled to recover all sums paid for the Works or for such part (as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor.

11.5 Removal of Defective Work

If the defect or damage cannot be remedied expeditiously on the Site and the Procuring Entity gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged. This consent may require the Contractor to increase the amount of the Performance Security by the full replacement cost of these items, or to provide other appropriate security.

11.6 Further Tests

11.6.1 If the work of remedying of any defect or damage may affect the performance of the Works, the Architect may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 14 days after the defect or damage is remedied.

11.6.2 These tests shall be carried out in accordance with the terms applicable to the previous tests,

except that they shall be carried out at the risk and cost of the Party liable, under Sub-Clause 11.2 [Cost of Remedying Defects], for the cost of the remedial work.

11.7 Right of Access

Until the Completion Certificate has been issued, the Contractor shall have such right of access to the Works as is reasonably required in order to comply with this Clause, except as may be inconsistent with the Procuring Entity's reasonable security restrictions.

11.8 Contractor to Search

The Contractor shall, if required by the Engineer, search for the cause of any defect on parts of the works that have already accepted, under the direction of the Engineer. Unless the defect is to be remedied at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Cost of the search plus profit shall be agreed or determined by the Architect in accordance with Sub-Clause 3.5 [Determinations] and shall be included in the Contract Price.

11.9 Completion Certificate

11.9.1 Performance of the Contractor's obligations shall not be considered to have been completed until the Architect has issued the Completion Certificate to the Contractor, stating the date on which the Contractor completed his obligations under the Contract.

11.9.2 The Architect shall issue the Completion Certificate within 30 days after the latest of the expiry dates of the Defects Liability Period, or as soon thereafter as the Contractor has supplied all the Contractor's Documents and completed and tested all the Works, including remedying any defects. A copy of the Completion Certificate shall be issued to the Procuring Entity.

11.9.3 Only the Completion Certificate shall be deemed to constitute acceptance of the Works.

11.10 Unfulfilled Obligations

After the Completion Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, the Contract shall be deemed to remain in force.

11.11 Clearance of Site

11.11.1 Upon receiving the Completion Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.

11.11.2 If all these items have not been removed within 30 days after receipt by the Contractor of the Completion Certificate, the Procuring Entity may sell or otherwise dispose of any remaining items. The Procuring Entity shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

11.11.3 Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Procuring Entity's costs, the Contractor shall pay the outstanding balance to the Procuring Entity.

12.0 MEASUREMENT AND EVALUATION

12.1 Works to be Measured

- 12.1.1 The Works shall be measured, and valued for payment, in accordance with this Clause. The Contractor shall show in each application under Sub-Clauses 14.3 [Application for Interim Payment Certificates], 14.10 [Statement on Completion] and 14.11 [Application for Final Payment Certificate] the quantities and other particulars detailing the amounts which he considers to be entitled under the Contract.
- 12.1.2 Whenever the Architect requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:
- a) promptly either attend or send another qualified representative to assist the Architect in making the measurement, and
 - b) supply any particulars requested by the Engineer.
- 12.1.3 If the Contractor fails to attend or send a representative, the measurement made by the Architect shall be accepted as accurate.
- 12.1.4 Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured from records, these shall be prepared by the Engineer. The Contractor shall, as and when requested, attend to examine and agree the records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.
- 12.1.5 If the Contractor examines and disagrees the records, and/ or does not sign them as agreed, then the Contractor shall give notice to the Architect of the respects in which the records are asserted to be inaccurate. After receiving this notice, the Architect shall review the records and either confirm or vary them and certify the payment of the undisputed part. If the Contractor does not so give notice to the Architect within 14 days after being requested to examine the records, they shall be accepted as accurate.

12.2 Method of Measurement

Except as otherwise stated in the Contract:

- a) Measurement shall be made of the net actual quantity of each item of the Permanent Works, and
- b) the method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules.

12.3 Evaluation

- 12.3.1 Except as otherwise stated in the Contract, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the value of work done by evaluating each item of work, applying the measurement agreed or determined in accordance with the above Sub-Clauses 12.1 and 12.2 and the appropriate rate or price for the item.
- 12.3.2 For each item of work, the appropriate rate or price for the item shall be the rate or price specified for such item in the Contract, if there is no such item, specified for similar work.
- 12.3.3 Any item of work included in the Bill of Quantities for which no rate or price was specified shall be considered as included in other rates and prices in the Bill of Quantities and will not be paid for separately.
- 12.3.4 However, for a new item of work, a new rate or price shall be appropriate for such item of work if:
- a) The work is instructed under Clause 13 [Variations and Adjustments],
 - b) no rate or price is specified in the Contract for this item, and

- c) no specified rate or price is appropriate because the item of work is not of similar character, or is not executed under similar conditions, as any item in the Contract.

12.3.5 Each new rate or price shall be derived from any relevant rates or prices in the Contract. If no rates or prices are relevant for the new item of work, it shall be derived from the reasonable Cost of executing such work, prevailing market rates, together with profit, taking account of any other relevant matters.

12.3.6 Until such time as an appropriate rate or price is agreed or determined, the Architect shall determine a provisional rate or price for the purposes of Interim Payment Certificates as soon as the concerned work commences.

12.3.7 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (*which would be the tender price*), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows: $(\text{corrected tender price} - \text{tender price}) / \text{tender price} \times 100$.

12.4 Omissions

Whenever the omission of any work forms part (or all) of a Variation, the value of which has not been agreed, if:

- a) The Contractor will incur (or has incurred) cost which, if the work had not been omitted, would have been deemed to be covered by a sum forming part of the Accepted Contract Amount;
- b) The omission of the work will result (or has resulted) in this sum not forming part of the Contract Price; and
- c) this cost is not deemed to be included in the evaluation of any substituted work; then the Contractor shall give notice to the Architect accordingly, with supporting particulars. Upon receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this cost, which shall be included in the Contract Price.

13.0 VARIATIONS AND ADJUSTMENTS

13.1 Right to Vary

13.1.1 Variations may be initiated by the Architect at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by a request for the Contractor to submit a proposal. No Variation instructed by the Architect under this Clause shall in any way vitiate or invalidate the Contract.

13.1.2 The Contractor shall execute and be bound by each Variation, unless the Contractor promptly gives notice to the Architect stating (with supporting particulars) that (i) the Contractor cannot readily obtain the Goods required for the Variation, or (ii) such Variation triggers a substantial change in the sequence or progress of the Works. Upon receiving this notice, the Architect shall cancel, confirm or vary the instruction.

13.1.3 Each Variation may include:

- a) changes to the quantities of any item of work included in the Contract (however, such changes do not necessarily constitute a Variation),
- b) changes to the quality and other characteristics of any item of work,
- c) changes to the levels, positions and/ or dimensions of any part of the Works,
- d) omission of any work unless it is to be carried out by others,
- e) any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work, or

- f) changes to the sequence or timing of the execution of the Works.

13.1.4 The Contractor shall not make any alteration and/or modification of the Permanent Works, unless and until the Architect instructs after obtaining approval of the Procuring Entity.

132 Variation Order Procedure

- 132.1 Prior to any Variation Order under Sub-Clause 13.1.4 the Architect shall notify the Contractor of the nature and form of such variation. As soon as possible after having received such notice, the Contractor shall submit to the Engineer:
- a) A description of work, if any, to be performed and a programme for its execution, and
 - b) the Contractor's proposals for any necessary modifications to the Programme according to Sub-Clause 8.3 or to any of the Contractor's obligations under the Contract, and
 - c) the Contractor's proposals for adjustment to the Contract Price.

Following the receipt of the Contractor's submission the Architect shall, after due consultation with the Employer and the Contractor, decide as soon as possible whether or not the variation shall be carried out. If the Architect decides that the variation shall be carried out, he shall issue a Variation Order clearly identified as such in accordance with the Contractor's submission or as modified by agreement.

If the Architect and the Contractor are unable to agree the adjustment of the Contract Price, the provisions of Sub-Clause 13.2.2 shall apply.

1322 Disagreement on Adjustment of the Contract Price

If the Contractor and the Architect are unable to agree on the adjustment of the Contract Price, the adjustment shall be determined in accordance with the rates specified in the Bills of Quantities or Schedule of Daywork Prices. If the rates contained in the Bills of Quantities or Dayworks Prices are not directly applicable to the specific work in question, suitable rates shall be established by the Architect reflecting the level of pricing in the Dayworks Prices. Where rates are not contained in the said Prices, the amount shall be such as is in all the circumstances reasonable, reflecting a market price. Due account shall be taken of any over- or under-recovery of overheads by the Contractor in consequence of the variation. The Contractor shall also be entitled to be paid:

- a) The cost of any partial execution of the Work rendered useless by any such variation,
- b) The cost of making necessary alterations to Plant already manufactured or in the course of manufacture or of any work done that has to be altered in consequence of such a variation,
- c) any additional costs incurred by the Contractor by the disruption of the progress of the Works as detailed in the Programme, and
- d) the net effect of the Contractor's finance costs, including interest, caused by the variation.

The Architect shall on this basis determine the rates or prices to enable on-account payment to be included in certificates of payment.

1323 Contractor to Proceed

On receipt of a Variation Order, the Contractor shall forthwith proceed to carry out the variation and be bound to these Conditions in so doing as if such variation was stated in the Contract. The work shall not be delayed pending the granting of an extension of the Time for Completion or an adjustment to the Contract Price under Sub-Clause 14.1.

133 Value Engineering

- 13.3.1 The Contractor may, at any time, submit to the Architect written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Procuring Entity of executing, maintaining or operating the Works, (iii) improve the efficiency or value to the Procuring Entity of the completed Works, or (iv) otherwise, be of benefit to the Procuring Entity.
- 13.3.2 The proposal shall be prepared at the cost of the Contractor and shall include the items listed in Sub-Clause 13.2 [Variation Procedure].
- 13.3.3 If a proposal, which is approved by the Engineer, includes a change in the design of part of the Permanent Works, then unless otherwise agreed by both Parties:
- a) The Contractor shall design this part,
 - b) sub-paragraphs (a) to (d) of Sub-Clause 4.1 [Contractor's General Obligations] shall apply, and
 - c) if this change results in a reduction in the contract value of this part, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine a fee, which shall be included in the Contract Price. This fee shall be (50%) of the difference between the following amounts:
 - i) such reduction in contract value, resulting from the change, excluding adjustments under Sub-Clause 13.8 [Adjustments for Changes in Legislation] and Sub-Clause 13.9 [Adjustments for Changes in Cost], and
 - ii) the reduction (if any) in the value to the Procuring Entity of the varied works, taking account of any improvement in quality, anticipated life or operational efficiencies.
- 13.3.4 However, if the amount established in item 13.2.3 (c) (i) is less than amount established in item 13.2.3 (c) (ii), there shall not be a fee. However, if the amount established in item 13.2.3 (c) (i) is more than amount established in item 13.2.3 (c) (ii), it shall result in a price variation to the Procuring Entity.

134 Variation Procedure for Value Engineering proposal

- 13.4.1 If the Architect requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:
- a) A description of the proposed work to be performed and a programme for its execution,
 - b) the Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 8.3 [Programme] and to the Time for Completion, and
 - c) the Contractor's proposal for evaluation of the Variation.
- 13.4.2 The Architect shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.3 [Value Project Engineering] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.
- 13.4.3 Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Architect to the Contractor, who shall acknowledge receipt.
- 13.4.4 Each Variation shall be evaluated in accordance with Clause 12 [Measurement and Evaluation], unless the Architect instructs or approves otherwise in accordance with this Clause.

135 Payment in Applicable Currencies

If the Contract provides for payment of the Contract Price in more than one currency, then whenever an adjustment is agreed, approved or determined as stated above, the amount

payable in each of the applicable currencies shall be specified. For this purpose, reference shall be made to the actual or expected currency proportions of the Cost of the varied work, and to the proportions of various currencies specified for payment of the Contract Price.

136 Provisional Sums

136.1 Each Provisional Sum shall only be used, in whole or in part, in accordance with the Architect instructions, and the Contract Price shall be adjusted accordingly. The total sum paid to the Contractor shall include only such amounts, for the work, supplies or services to which the Provisional Sum relates, as the Architect shall have instructed. For each Provisional Sum, the Architect May instruct:

- a) Work to be executed (including Plant, Materials or services to be supplied) by the Contractor and valued under Sub-Clause 13.2 [Variation Procedure]; and/or
- b) Plant, Materials or services to be purchased by the Contractor, from a nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]) or otherwise; and for which there shall be included in the Contract Price:
 - i) The actual amounts paid (or due to be paid) by the Contractor, and
 - ii) a sum for overhead charges and profit, calculated as a percentage of these actual amounts by applying the relevant percentage rate (if any) stated in the appropriate Schedule. If there is no such rate, the percentage rate stated in **the Special Conditions of Contract** shall be applied.

The Contractor shall, when required by the Engineer, produce quotations, invoices, vouchers and accounts or receipts in substantiation.

137 Dayworks

- 137.1 For work of a minor or incidental nature, the Architect may instruct that a Variation shall be executed on a Daywork basis. The work shall then be valued in accordance with the Daywork Schedule included in the Contract, and the following procedure shall apply. If a Daywork Schedule is not included in the Contract, this Sub-Clause shall not apply.
- 137.2 Before ordering Goods for the work, the Contractor shall submit quotations to the Engineer. When applying for payment, the Contractor shall submit invoices, vouchers and accounts or receipts for any Goods.
- 137.3 Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall deliver each day to the Architect accurate statements induplicate which shall include the following details of the resources used in executing the previous day's work:
- a) The names, occupations and time of Contractor's Personnel,
 - b) the identification, type and time of Contractor's Equipment and Temporary Works, and
 - c) the quantities and types of Plant and Materials used.
- 137.4 One copy of each statement will, if correct, or when agreed, be signed by the Architect and returned to the Contractor. The Contractor shall then submit priced statements of these resources to the Engineer, prior to their inclusion in the next Statement under Sub-Clause 14.3 [Application for Interim Payment Certificates].

138 Adjustments for Changes in Legislation

- 138.1 The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of Kenya (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.

- 1382 If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - b) payment of any such Cost, which shall be included in the Contract Price.

1383 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

1384 Notwithstanding the foregoing, the Contractor shall not be entitled to an extension of time if the relevant delay has already been taken into account in the determination of a previous extension of time and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the table of adjustment data in accordance with the provisions of Sub-Clause 13.9 [Adjustments for Changes in Cost].

139 Adjustments for Changes in Cost

139.1 In this Sub-Clause, "table of adjustment data" means the completed table of adjustment data for local and foreign currencies included in the Schedules. If there is no such table of adjustment data, this Sub-Clause shall not apply.

1392 If this Sub-Clause applies, the amounts payable to the Contractor shall be adjusted for rises or falls in the cost of labor, Goods and other inputs to the Works, by the addition or deduction of the amounts determined by the formulae prescribed in this Sub-Clause. To the extent that full compensation for any rise or fall in Costs is not covered by the provisions of this or other Clauses, the Accepted Contract Amount shall be deemed to have included amounts to cover the contingency of other rises and falls in costs.

1393 The adjustment to be applied to the amount otherwise payable to the Contractor, as valued in accordance with the appropriate Schedule and certified in Payment Certificates, shall be determined from formulae for each of the currencies in which the Contract Price is payable. No adjustment is to be applied to work valued on the basis of Cost or current prices. The formulae shall be of the following general type:

Price Adjustment Formula

Prices shall be adjusted for fluctuations in the cost of inputs only if **provided for in the SCC**. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies:

$$P = A + B \, I_m / I_o$$

where:

P is the adjustment factor for the portion of the Contract Price payable.

A and **B** are coefficients **specified in the SCC**, representing then on adjustable and adjustable portions, respectively, of the Contract Price payable and

I m is the index prevailing at the end of the month being invoiced and **I o** is the index prevailing 30 days before Bid opening for inputs payable.

NOTE: The sum of the two coefficients A and B should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A, for the nonadjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other nonadjustable components. The sum of the adjustments for each currency are added to the Contract Price.

- 1394 The cost indices or reference prices stated in the table of adjustment data shall be used. If their source is in doubt, it shall be determined by the Engineer. For this purpose, reference shall be made to the values of the indices at stated dates (quoted in the fourth and fifth columns respectively of the table) for the purposes of clarification of the source; although these dates (and thus these values) may not correspond to the base cost indices.
- 1395 In case where the “currency of index” is not the relevant currency of payment, each index shall be converted into the relevant currency of payment at the selling rate, established by the Central Bank of Kenya, of this relevant currency on the above date for which the index is required to be applicable.
- 1396 Until such time as each current cost index is available, the Architect shall determine a provisional index for the issue of Interim Payment Certificates. When a current cost index is available, the adjustment shall be recalculated accordingly.
- 1397 If the Contractor fails to complete the Works within the Time for Completion, adjustment of prices there after shall be made using either (i) each index or price applicable on the date 49 days prior to the expiry of the Time for Completion of the Works, or (ii) the current index or price, whichever is more favorable to the Procuring Entity.
- 1398 The weightings (coefficients) for each of the factors of cost stated in the table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variations.

14.0 CONTRACT PRICE AND PAYMENT

14.1 The Contract Price

14.1.1 Unless otherwise stated in the Special Conditions:

- a) The value of the payment certificate shall be agreed or determined under Sub-Clause 12.3 [Evaluation] and be subject to adjustments in accordance with the Contract;
- b) the Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.8 [Adjustments for Changes in Legislation];
- c) any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities:
 - i) of the Works which the Contractor is required to execute, or
 - ii) for the purposes of Clause 12 [Measurement and Evaluation]; and
- d) the Contractor shall submit to the Engineer, within 30 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules. The Architect may take account of the break down when preparing Payment Certificates but shall not be bound by it.

14.1.2 Notwithstanding the provisions of subparagraph (b) of sub-clause 14.1.1, Contractor's Equipment, including essential spare parts therefore, imported by the Contractor for the sole purpose of executing the Contract shall not be exempt from the payment of import duties and taxes upon importation.

14.2 Advance Payment

14.2.1 The Procuring Entity shall make an advance payment, as an interest-free loan for mobilization and cashflow support, when the Contractor submits a guarantee in accordance with this Clause. The total advance payment, the number and timing of instalments (if more than one), and the applicable currencies and proportions, shall be as stated in the **Special Conditions of Contract.**

- 14.2.2 Unless and until the Procuring Entity receives this guarantee, or if the total advance payment is not stated in the Special Conditions of Contract, this Sub-Clause shall not apply.
- 14.2.3 The Architect shall deliver to the Procuring Entity and to the Contractor an Interim Payment Certificate for the advance payment or its first instalment after receiving a Statement (under Sub-Clause 14.3 [Application for Interim Payment Certificates]) and after the Procuring Entity receives (i) the Performance Security in accordance with Sub-Clause 4.2 [Performance Security] and (ii) a guarantee in amounts and currencies equal to the advance payment. This guarantee shall be issued by a reputable bank or financial institutions elected by the Contractor and shall be in the form annexed to the Special Conditions or in another form approved by the Procuring Entity.
- 14.2.4 The Contractor shall ensure that the guarantee is valid and enforceable until the advance payment has been repaid, but its amount shall be progressively reduced by the amount repaid by the Contractor as indicated in the Payment Certificates. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 30 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.
- 14.2.5 Unless stated otherwise in **the Special Conditions of Contract**, the advance payment shall be repaid through percentage deductions from the interim payments determined by the Architect in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates], as follows:
- a) Deductions shall commence in the next interim Payment Certificate following that in which the total of all certified interim payments (excluding the advance payment and deductions and repayments of retention) exceeds 30 percent (30%) of the Accepted Contract Amount Less Provisional Sums; and
 - b) deductions shall be made at the amortization rate stated in the **Special Conditions of Contract** of the amount of each Interim Payment Certificate (excluding the advance payment and deductions for its repayments as well as deductions for retention money) in the currencies and proportions of the advance payment until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the time when 90 percent (90%) of the Accepted Contract Amount less Provisional Sums has been certified for payment.
- 14.2.6 If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination under Clause 15 [Termination by Procuring Entity], Sub-Clause 16 [Suspension and Termination by Contractor] or Clause 19 [Force Majeure] (as the case may be), the whole of the balance then outstanding shall immediately become due and in case of termination under Clause 15 [Termination by Procuring Entity], except for Sub-Clause 15.5 [Procuring Entity's Entitlement to Termination for Convenience], payable by the Contractor to the Procuring Entity.

14.3 Application for Interim Payment Certificates

- 14.3.1 The Contractor shall submit a Statement (in number of copies indicated in the **Special Conditions of Contract**) to the Architect after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers itself to be entitled, together with supporting documents which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [Progress Reports].
- 14.3.2 The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:
- a) the estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);

- b) any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-Clause 13.8 [Adjustments for Changes in Legislation] and Sub-Clause 13.9 [Adjustments for Changes in Cost];
- c) any amount to be deducted for retention, calculated by applying the percentage of retention stated in **the Special Conditions of Contract** to the total of the above amounts, until the amount so retained by the Procuring Entity reaches the limit of Retention Money (if any) stated in **the Special Conditions of Contract**;
- d) any amounts to be added for the advance payment and (if more than one instalment) and to be deducted for its repayments in accordance with Sub-Clause 14.2 [Advance Payment];
- e) any amounts to be added and deducted for Plant and Materials in accordance with Sub-Clause 14.5 [Plant and Materials intended for the Works];
- f) any other additions or deductions which may have become due under the Contractor otherwise, including those under Clause 20 [Claims, Disputes and Arbitration]; and
- g) the deduction of amounts certified in all previous Payment Certificates.

14.4 Schedule of Payments

14.4.1 If the Contract includes a schedule of payments specifying the instalments in which the Contract Price will be paid, then unless otherwise stated in this schedule:

- a) The instalments quoted in this schedule of payments shall be the estimated contract values for the purposes of sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates];
- b) Sub-Clause 14.5 [Plant and Materials intended for the Works] shall not apply; and
- c) If these instalments are not defined by reference to the actual progress achieved in executing the Works, and if actual progress is found to be less or more than that on which this schedule of payments was based, then the Architect may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine revised instalments, which shall take account of the extent to which progress is less or more than that on which the instalments were previously based.

14.4.2 If the Contract does not include a schedule of payments, the Contractor shall submit non-binding estimates of the payments which he expects to become due during each quarterly period. The first estimate shall be submitted within 42 days after the Commencement Date. Revised estimates shall be submitted at quarterly intervals, until the Taking-Over Certificate has been issued for the Works.

14.5 Plant and Materials intended for the Works

14.5.1 If this Sub-Clause applies, Interim Payment Certificates shall include, under sub-paragraph (e) of Sub-Clause 14.3,

- (i) an amount for Plant and Materials which have been sent to the Site for incorporation in the Permanent Works, and
- (ii) a reduction when the contract value of such Plant and Materials is included as part of the Permanent Works under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates].

14.5.2 If the lists referred to in sub-clause 14.5.3 sub-paragraphs (b)(i) or (c)(i) below are not included in the Schedules, this Sub-Clause shall not apply.

14.5.3 The Architect shall determine and certify each addition if the following conditions are satisfied:

a) The Contractor has:

- i) kept satisfactory records (including the orders, receipts, Costs and use of Plant and Materials) which are available for inspection, and
- ii) submitted statement of the Cost of acquiring and delivering the Plant and Materials to the Site, supported by satisfactory evidence;

and either:

b) the relevant Plant and Materials:

- i) are those listed in the Schedules for payment when shipped,
- ii) have been shipped to Kenya, enroute to the Site, in accordance with the Contract; and
- iii) are described in a clean shipped bill of lading or other evidence of shipment, which has been submitted to the Architect together with evidence of payment of freight and insurance, any other documents reasonably required, and a bank guarantee in a form and issued by an entity approved by the Procuring Entity in amounts and currencies equal to the amount due under this Sub-Clause: this guarantee may be in a similar form to the form referred to in Sub-Clause 14.2 [Advance Payment] and shall be valid until the Plant and Materials are properly stored on Site and protected against loss, damage or deterioration; or

c) the relevant Plant and Materials:

- i) are those listed in the Schedules for payment when delivered to the Site, and
- ii) have been delivered to and are properly stored on the Site, are protected against loss, damage or deterioration and appear to be in accordance with the Contract.

14.5.4 The additional amount to be certified shall be the equivalent of eighty percent (80%) of the Architect determination of the cost of the Plant and Materials (including delivery to Site), taking account of the documents mentioned in this Sub-Clause and of the contract value of the Plant and Materials.

14.5.5 The currencies for this additional amount shall be the same as those in which payment will become due when the contract value is included under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates]. At that time, the Payment Certificate shall include the applicable reduction which shall be equivalent to, and in the same currencies and proportions as, this additional amount for the relevant Plant and Materials.

14.6 Issue of Interim Payment Certificates

14.6.1 No amount will be certified or paid until the Procuring Entity has received and approved the Performance Security. Thereafter, the Architect shall, within 30 days after receiving a Statement and supporting documents, deliver to the Procuring Entity and to the Contractor an Interim Payment Certificate which shall state the amount which the Architect fairly determines to be due, with all supporting particulars for any reduction or withholding made by the Architect on the Statement if any.

14.6.2 However, prior to issuing the Taking-Over Certificate for the Works, the Architect shall not be bound to issue an Interim Payment Certificate in an amount which would (after retention and other deductions) be less than the minimum amount of Interim Payment Certificates (if any) stated in the **Special Conditions of Contract**. In this event, the Architect shall give notice to the Contractor accordingly.

14.6.3 An Interim Payment Certificate shall not be withheld for any other reason, although:

- a) if anything supplied or work done by the Contractor is not in accordance with the Contract, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and/or
- b) if the Contractor was or is failing to perform any work or obligation in accordance with the Contract, and had been so notified by the Engineer, the value of this work or obligation may be withheld until the work or obligation has been performed.

4.6.4 The Architect may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Architect acceptance, approval, consent or satisfaction.

14.7 Payment

14.7.1 The Procuring Entity shall pay to the Contractor:

- a) The advance payment shall be paid within 60 days after signing of the contract by both parties or within 60 days after receiving the documents in accordance with Sub-Clause 4.2 [Performance Security] and Sub-Clause 14.2 [Advance Payment], whichever is later;
- b) The amount certified in each Interim Payment Certificate within 60 days after the Architect Issues Interim Payment Certificate; and
- c) the amount certified in the Final Payment Certificate within 60 days after the Procuring Entity Issues Interim Payment Certificate; or after determination of any disputed amount shown in the Final Statement in accordance with Sub-Clause 16.2 [Termination by Contractor].

14.7.2 Payment of the amount due in each currency shall be made into the bank account, nominated by the Contractor, in the payment country (for this currency) specified in the Contract.

14.8 Delayed Payment

14.8.1 If the Contractor does not receive payment in accordance with Sub-Clause 14.7 [Payment], the Contractor shall be entitled to receive financing charges (simple interest) monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.7 [Payment], irrespective (in the case of its sub-paragraph (b) of the date on which any Interim Payment Certificate is issued.

14.8.2 These financing charges shall be calculated at the annual rate of three percentage points above the mean rate of the Central Bank in Kenya of the currency of payment, or if not available, the interbank offered rate, and shall be paid in such currency.

14.8.3 The Contractor shall be entitled to this payment without formal notice and certification, and without prejudice to any other right or remedy.

14.9 Payment of Retention Money

14.9.1 When the Taking-Over Certificate has been issued for the Works, the first half of the Retention Money shall be certified by the Architect for payment to the Contractor. If a Taking-Over Certificate is issued for a Section or part of the Works, a proportion of the Retention Money shall be certified and paid. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section or part, by the estimated final Contract Price.

14.9.2 Promptly after the latest of the expiry dates of the Defects Liability Periods, the outstanding balance of the Retention Money shall be certified by the Architect for payment to the Contractor. If a Taking-Over Certificate was issued for a Section, a proportion of the second half of the Retention Money shall be certified and paid promptly after the expiry date of the Defects Notification Period for the Section. This proportion shall be half (50%) of the

proportion calculated by dividing the estimated contract value of the Section by the estimated final Contract Price.

1493 However, if any work remains to be executed under Clause 11 [Defects Liability], the Architect shall be entitled to withhold certification of the estimated cost of this work until it has been executed.

1494 When calculating these proportions, no account shall be taken of any adjustments under Sub-Clause 13.8 [Adjustments for Changes in Legislation] and Sub-Clause 13.9 [Adjustments for Changes in Cost].

1495 Unless otherwise stated in the Special Conditions, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment by the Engineer, the Contractor shall be entitled to substitute a Retention Money Security guarantee, in the form annexed to the Special Conditions or in another form approved by the Procuring Entity and issued by a reputable bank or financial institution selected by the Contractor, for the second half of the Retention Money.

1496 The Procuring Entity shall return the Retention Money Security guarantee to the Contractor within 14 days after receiving a copy of the Completion Certificate.

14.10 Statement at Completion

1410.1 Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Architect three copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 14.3 [Application for Interim Payment Certificates], showing:

- a) the value of all work done in accordance with the Contract up to the date stated in the Taking-Over Certificate for the Works,
- b) any further sums which the Contractor considers to be due, and
- c) an estimate of any other amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in this Statement at completion.

1410.2 The Architect shall then certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates].

14.11 Application for Final Payment Certificate

1411.1 Within 60 days after receiving the Completion Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement with supporting documents showing in detail in a form approved by the Engineer:

- a) The value of all work done in accordance with the Contract, and
- b) Any further sums which the Contractor considers to be due to him under the Contract.

1411.2 If the Architect disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Architect may reasonably require within 30 days from receipt of said draft and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Architect the final statement as agreed. This agreed statement is referred to in these Conditions as the "Final Statement".

1411.3 However, if, following discussions between the Architect and the Contractor and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Architect shall deliver to the Procuring Entity (with a copy to the Contractor) an Interim Payment Certificate for the agreed parts of the draft final statement. Thereafter, if the dispute is finally resolved under Sub-Clause 20.5 [Arbitration] or Sub-Clause 20.3 [Amicable Settlement], the Contractor shall then prepare and submit to the Procuring

Entity (with a copy to the Engineer) a Final Statement.

14.12 Discharge

When submitting the Final Statement, the Contractor shall submit a discharge which confirms that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor under or in connection with the Contract. This discharge may state that it becomes effective when the Contractor has received the Performance Security and the outstanding balance of this total, in which event the discharge shall be effective on such date.

14.13 Issue of Final Payment Certificate

14.13.1 Within 30 days after receiving the Final Statement and discharge in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Architect shall deliver, to the Procuring Entity and to the Contractor, the Final Payment Certificate which shall state:

- a) The amount which he fairly determines is finally due, and
- b) After giving credit to the Procuring Entity for all amounts previously paid by the Procuring Entity and for all sums to which the Procuring Entity is entitled, the balance (if any) due from the Procuring Entity to the Contractor or from the Contractor to the Procuring Entity, as the case may be.

14.13.2 If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Architect shall request the Contractor to do so. If the Contractor fails to submit an application within a period of 30 days, the Architect shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

14.14 Cessation of Procuring Entity's Liability

14.14.1 The Procuring Entity shall not be liable to the Contractor for any matter or thing under or in connection with the Contract or execution of the Works, except to the extent that the Contractor shall have included an amount expressly for it:

- a) in the Final Statement and also,
- b) (except for matters or things arising after the issue of the Taking-Over Certificate for the Works) in the Statement at completion described in Sub-Clause 14.10 [Statement at Completion].

14.14.2 However, this Sub-Clause shall not limit the Procuring Entity's liability under his indemnification obligations, or the Procuring Entity's liability in any case of fraud, deliberate default or reckless misconduct by the Procuring Entity.

14.15 Currencies of Payment

The Contract Price shall be paid in the currency or currencies named in the Schedule of Payment Currencies. If more than one currency is so named, payments shall be made as follows:

- a) If the Accepted Contract Amount was expressed in Local Currency only:
 - i) the proportions or amounts of the Local and Foreign Currencies, and the fixed rates of exchange to be used for calculating the payments, shall be as stated in the Schedule of Payment Currencies, except as otherwise agreed by both Parties;
 - ii) payments and deductions under Sub-Clause 13.6 [Provisional Sums] and Sub-Clause 13.8 [Adjustments for Changes in Legislation] shall be made in the applicable currencies and proportions; and
 - iii) other payments and deductions under sub-paragraphs (a) to (d) of Sub-Clause 14.3 [Application for Interim Payment Certificates] shall be made in the currencies and

- proportions specified in sub- paragraph (a) (i) above;
- b) payment of the damages specified in the Special Conditions of Contract, shall be made in the currencies and proportions specified in the Schedule of Payment Currencies;
- c) other payments to the Procuring Entity by the Contractor shall be made in the currency in which the sum was expended by the Procuring Entity, or in such currency as may be agreed by both Parties;
- d) if any amount payable by the Contractor to the Procuring Entity in a particular currency exceeds the sum payable by the Procuring Entity to the Contractor in that currency, the Procuring Entity may recover the balance of this amount from the sums otherwise payable to the Contractor in other currencies; and
- e) if no rates of exchange are stated in the Schedule of Payment Currencies, they shall be those prevailing on the Base Date and determined by the Central Bank of Kenya.

15.0 TERMINATION BY PROCURING ENTITY

15.1 Notice to correct any defects or failures

If the Contractor fails to carry out any obligation under the Contract, the Architect may by notice require the Contractor to make good the failure and to remedy it within 30 days.

15.2 Termination by Procuring Entity

15.2.1 The Procuring Entity shall be entitled to terminate the Contract if the Contractor breaches the contract based on following circumstances which shall include but not limited to:

- a) fails to comply with Sub-Clause 4.2 [Performance Security] or with a notice under Sub-Clause 15.1 [Notice to Correct],
- b) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract,
- c) without reasonable excuse fails:
 - i) to proceed with the Works in accordance with Clause 8 [Commencement, Delays and Suspension], or
 - ii) to comply with a notice issued under Sub-Clause 7.5 [Rejection] or Sub-Clause 7.6 [Remedial Work], within 30 days after receiving it,
- d) subcontracts the major part or whole of the Works or assigns the Contract without the consent of the Procuring Entity,
- e) becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events, or
- f) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:
 - i) for doing or for bearing to do any action in relation to the Contract, or
 - ii) for showing or for bearing to show favor or disfavor to any person in relation to the Contract, or
 - iii) if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (f). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination, or
- g) If the contract or repeatedly fails to remedy delivers defective work,
- h) based on reasonable evidence, has engaged in Fraud and Corruption in competing for or in executing the Contract.

- 15.2.2 In any of these events or circumstances, the Procuring Entity may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub- paragraph (e) or (f) or (g) or (h), the Procuring Entity may by notice terminate the Contract immediately.
- 15.2.3 The Procuring Entity's election to terminate the Contract shall not prejudice any other rights of the Procuring Entity, under the Contractor otherwise.
- 15.2.4 The Contractor shall then leave the Site and deliver any required Goods, all Contractor's Documents, and other design documents made by or for him, to the Engineer. However, the Contractor shall use his best efforts to comply immediately with any reasonable instructions included in the notice.
- 15.2.5 After termination, the Procuring Entity may complete the Works and/ or arrange for any other entities to do so. The Procuring Entity and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor.
- 15.2.6 The Procuring Entity shall then give notice that the Contractor's Equipment and Temporary Works will be released to the Contractor at or near the Site. The Contractor shall promptly arrange their removal, at the risk and cost of the Contractor. However, if by this time the Contractor has failed to make a payment due to the Procuring Entity, these items may be sold by the Procuring Entity in order to recover this payment. Any balance of the proceeds shall then be paid to the Contractor.

15.3 Valuation at Date of Termination

As soon as practicable after a notice of termination under Sub-Clause 15.2 [Termination by Procuring Entity] has taken effect, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the value of the Works, Goods and Contractor's Documents, and any other sums due to the Contractor for work executed in accordance with the Contract.

15.4 Payment after Termination

After a notice of termination under Sub-Clause 15.2 [Termination by Procuring Entity] has taken effect, the Procuring Entity may:

- a) Proceed in accordance with Sub-Clause 20.2 [Procuring Entity's Claims],
- b) withhold further payments to the Contractor until the costs of execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Procuring Entity, have been established, and/ or
- c) recover from the Contractor any losses and damages incurred by the Procuring Entity and any extra costs of completing the Works, after allowing for any sum due to the Contractor under Sub-Clause 15.3 [Valuation at Date of Termination]. After recovering any such losses, damages and extra costs, the Procuring Entity shall pay any balance to the Contractor.

15.5 Procuring Entity's Entitlement to Termination for Convenience

The Procuring Entity shall be entitled to terminate the Contract, at any time at the Procuring Entity's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 30 days after the later of the dates on which the Contractor receives this notice or the Procuring Entity returns the Performance Security. The Procuring Entity shall not terminate the Contract under this Sub-Clause in order to execute the Works itself or to arrange for the Works to be executed by another contractor or to avoid a termination of the Contract by the Contractor under Sub-Clause 16.2 [Termination by Contractor]. After this termination, the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment] and shall be paid

in accordance with Sub-Clause 16.4 [Payment on Termination].

15.6 Fraud and Corruption

The Contractor shall ensure compliance with the Kenya Government's Anti-Corruption Laws and its prevailing sanctions.

15.7 Corrupt gifts and payments of commission

15.7.1 The Contractor shall not;

- a) Offer or give or agree to give to any person in the service of the Procuring Entity any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other Contract for the Procuring Entity or for showing or for bearing to show favor or disfavor to any person in relation to this or any other contract for the Procuring Entity.
- b) Enter into this or any other contract with the Procuring Entity in connection with which commission has been paid or agreed to be paid by him or on his behalf or to his knowledge, unless before the Contract is made particulars of any such commission and of the terms and conditions of any agreement for the payment there of have been disclosed in writing to the Procuring Entity.

15.7.2 Any breach of this Condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) shall be an offence under the provisions of the Public Procurement and Asset Disposal Act (2015) and the Anti-Corruption and Economic Crimes Act (2003) of the Laws of Kenya.

16.0 SUSPENSION AND TERMINATION BY CONTRACTOR

16.1 Contractor's Entitlement to Suspend Work

16.1.1 If the Architect fails to certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates] or Sub-Clause 14.7 [Payment], or not receiving instructions that would enable the contractor to proceed with the works in accordance with the program, the Contractor may, after giving not less than 30 days' notice to the Procuring Entity, suspend work (or reduce the rate of work) unless and until the Contractor has received the Payment Certificate, reasonable evidence or payment, as the case may be and as described in the notice.

16.1.2 The Contractor's action shall not prejudice his entitlements to financing charges under Sub-Clause 14.8 [Delayed Payment] and to termination under Sub-Clause 16.2 [Termination by Contractor].

16.1.3 If the Contractor subsequently receives such Payment Certificate, evidence or payment (as described in the relevant Sub-Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.

16.1.4 If the Contractor suffers delay and/or incurs Cost as a result of suspending work (or reducing the rate of work) in accordance with this Sub-Clause, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such Cost-plus profit, which shall be included in the Contract Price.
- c) After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

16.2 Termination by Contractor

16.2.1 The Contractor shall be entitled to terminate the Contract if:

- a) the Architect fails, within 60 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate,
- b) the Contractor does not receive the amount due under an Interim Payment Certificate within 90 days after the expiry of the time stated in Sub-Clause 14.7 [Payment] within which payment is to be made (except for deductions in accordance with Sub-Clause 20.2 [Procuring Entity's Claims]),
- c) the Procuring Entity substantially fails to perform his obligations under the Contract in such manner as to materially and adversely affect the economic balance of the Contract and/or the ability of the Contractor to perform the Contract,
- d) a prolonged suspension affects the whole of the Works as described in Sub-Clause 8.11 [Prolonged Suspension], or
- e) the Procuring Entity becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events.
- f) the Contractor does not receive the Architect instruction recording the agreement of both Parties on the fulfilment of the conditions for the Commencement of Works under Sub-Clause 8.1 [Commencement of Works].

16.2.2 In any of these events or circumstances, the Contractor may, upon giving 14 days' notice to the Procuring Entity, terminate the Contract. However, in the case of sub-paragraph (e) or (f), the Contractor may by notice terminate the Contract immediately.

16.2.3 The Contractor's election to terminate the Contract shall not prejudice any other rights of the Contractor, under the Contract otherwise.

16.3 Cessation of Work and Removal of Contractor's Equipment

After a notice of termination under Sub-Clause 15.5 [Procuring Entity's Entitlement to Termination for Convenience], Sub-Clause 16.2 [Termination by Contractor] or Sub-Clause 19.6 [Optional Termination, Payment and Release] has taken effect, the Contractor shall promptly:

- a) cease all further work, except for such work as may have been instructed by the Architect for the protection of life or property or for the safety of the Works,
- b) hand over Contractor's Documents, Plant, Materials and other work, for which the Contractor has received payment, and
- c) remove all other Goods from the Site, except as necessary for safety, and leave the Site.

16.4 Payment on Termination

After a notice of termination under Sub-Clause 16.2 [Termination by Contractor] has taken effect, the Procuring Entity shall promptly:

- a) Return the Performance Security to the Contractor,
- b) pay the Contractor in accordance with Sub-Clause 19.6 [Optional Termination, Payment and Release], and
- c) pay to the Contractor the amount of any loss or damage sustained by the Contractor as a result of this termination.

17.0 RISK AND RESPONSIBILITY

17.1 Indemnities

- 17.1.1 The Contractor shall indemnify and hold harmless the Procuring Entity, the Procuring Entity's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:
- a) Bodily injury, sickness, disease or death, of any person what so ever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, willful actor breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, or any of their respective agents, and
 - b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless and to the extent that any such damage or loss is attributable to any negligence, willful act or breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.
- 17.1.2 The Procuring Entity shall indemnify and hold harmless the Contractor, the Contractor's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of (1) bodily injury, sickness, disease or death, which is attributable to any negligence, willful act or breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, or any of their respective agents, and (2) the matters for which liability may be excluded from insurance cover, as described in sub-paragraphs (d)(i), (ii) and (iii) of Sub-Clause 18.3 [Insurance Against Injury to Persons and Damage to Property], unless and to the extent that any such damage or loss is attributable to any negligence, willful actor breach of the Contract by the contractor, the contractor's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

17.2 Contractor's Care of the Works

- 17.2.1 The Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the Taking-Over Certificate is issued (or is deemed to be issued under Sub-Clause 10.1 [Taking Over of the Works and Sections]) for the Works, when responsibility for the care of the Works shall pass to the Procuring Entity. If a Taking-Over Certificate is issued (or is so deemed to be issued) for any Section or part of the Works, responsibility for the care of the Section or part shall then pass to the Procuring Entity.
- 17.2.2 After responsibility has accordingly passed to the Procuring Entity, the Contractor shall take responsibility for the care of any work which is outstanding on the date stated in a Taking-Over Certificate, until this outstanding work has been completed.
- 17.2.3 If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, from any cause not listed in Sub-Clause 17.3 [Procuring Entity's Risks], the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with the Contract.
- 17.2.4 The Contractor shall be liable for any loss or damage caused by any actions performed by the Contractor after a Taking-Over Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Taking-Over Certificate has been issued and which arose from a previous event for which the Contractor was liable.

17.3 Procuring Entity's Risks

The risks referred to in Sub-Clause 17.4 [Consequences of Procuring Entity's Risks] below, in so far as they directly affect the execution of the Works in Kenya, are:

- a) War hostilities (whether war be declared or not),
- b) rebellion, riot, commotion or disorder, terrorism, sabotage by persons other than the Contractor's Personnel,
- c) explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such explosives, radiation or radio-activity,
- d) pressure waves caused by aircraft or other aerial devices traveling at sonic or supersonic speeds,
- e) use or occupation by the Procuring Entity of any part of the Permanent Works, except as may be specified in the Contract,
- f) design of any part of the Works by the Procuring Entity's Personnel or by others for whom the Procuring Entity is responsible, and
- g) any operation of the forces of nature which is Unforeseeable or against which an experienced contractor could not reasonably have been expected to have taken adequate preventive precautions.

17.4 Consequences of Procuring Entity's Risks

- 17.4.1 If and to the extent that any of the risks listed in Sub-Clause 17.3 above results in loss or damage to the Works, Goods or Contractor's Documents, the Contractor shall promptly give notice to the Architect and shall rectify this loss or damage to the extent required by the Engineer.
- 17.4.2 If the Contractor suffers delay and/ or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
 - (a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
 - (b) Payment of any such Cost, which shall be included in the Contract Price. In the case of subparagraphs (e) and (g) of Sub-Clause 17.3 [Procuring Entity's Risks], Accrued Costs shall be payable.
- 17.4.3 After receiving this further notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

17.5 Intellectual and Industrial Property Rights

- 17.5.1 In this Sub-Clause, "infringement" shall refer to an infringement (or alleged infringement) of any patent, registered design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works; and "claim" shall refer to a claim (or proceedings pursuing a claim) alleging an infringement.
- 17.5.2 Whenever a Party does not give notice to the other Party of any claim within 30 days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.
- 17.5.3 The Procuring Entity shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:
 - a) An unavoidable result of the Contractor's compliance with the Contract, or
 - b) A result of any Works being used by the Procuring Entity:

- i) for a purpose other than that indicated by, or reasonably to be inferred from, the Contract, or
 - ii) in conjunction with anything not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in the Contract.
- 17.5.4 The Contractor shall indemnify and hold the Procuring Entity harmless against and from any other claim which arises out of or in relation to (i) the manufacture, use, sale or import of any Goods, or (ii) any design for which the Contractor is responsible.
- 17.5.5 If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.
- 17.5.6 For operation and maintenance of any plant or equipment installed, the contractor shall grant a non-exclusive and non-transferable license to the Procuring Entity under the patent, utility models, or other intellectual rights owned by the contractor or a third party from whom the contract or has received the rights to grant sub-licenses and shall also grant to the Procuring Entity a non-exclusive and non-transferable rights (without the rights to sub-license) to use the knowhow and other technical information disclosed to the contract or under the contract. Nothing contained here-in shall be construed as transferring ownership of any patent, utility model, trademark, design, copy right, know-how or other intellectual rights from the contractor or any other third party to the Procuring Entity.

17.6 Limitation of Liability

- 17.6.1 Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contractor for any in director consequential loss or damage which may be suffered by the other Party in connection with the Contract, other than as specifically provided in Sub-Clause 8.7 [Delay Damages]; Sub-Clause 11.2 [Cost of Remedying Defects]; Sub-Clause 15.4 [Payment after Termination]; Sub-Clause 16.4 [Payment on Termination]; Sub-Clause 17.1 [Indemnities]; Sub-Clause 17.4(b) [Consequences of Procuring Entity's Risks] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights].
- 17.6.2 The total liability of the Contractor to the Procuring Entity, under or in connection with the Contract other than under Sub-Clause 4.19 [Electricity, Water and Gas], Sub-Clause 4.20 [Procuring Entity's Equipment and Free- Issue Materials], Sub-Clause 17.1 [Indemnities] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights], shall not exceed the sum resulting from the application of a multiplier (less or greater than one) to the Accepted Contract Amount, as stated in **the Special Conditions of Contract**, or (if such multiplier or other sum is not so stated) the Accepted Contract Amount.
- 17.6.3 This Sub-Clause shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

17.7 Use of Procuring Entity's Accommodation/Facilities

- 17.7.1 The Contractor shall take full responsibility for the care of the Procuring Entity provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the Contractor until cessation of occupation (where hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works).
- 17.7.2 If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Procuring

Entity is liable, the Contractor shall, at his own cost, rectify the loss or damage to the satisfaction of the Engineer.

18.0 INSURANCE

18.1 General Requirements for Insurances

- 18.1.1 In this Clause, “insuring Party” means, for each type of insurance, the Party responsible for effecting and maintaining the insurance specified in the relevant Sub-Clause.
- 18.1.2 Wherever the Contractor is the insuring Party, each insurance shall be effected with insurers and in terms approved by the Procuring Entity. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.
- 18.1.3 Wherever the Procuring Entity is the insuring Party, each insurance shall be effected with insurers and in terms acceptable to the Contractor. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.
- 18.1.4 If a policy is required to indemnify joint insured, the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. If a policy indemnifies additional joint insured, namely in addition to the insured specified in this Clause, (i) the Contractor shall act under the policy on behalf of these additional joint insured except that the Procuring Entity shall act for Procuring Entity's Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealings with the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.
- 18.1.5 Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify the loss or damage. Payments received from insurers shall be used for the rectification of the loss or damage.
- 18.1.6 The relevant insuring Party shall, within the respective periods stated in **the Special Conditions of Contract** (calculated from the Commencement Date), submit to the other Party:
- a) Evidence that the insurances described in this Clause have been effected, and
 - b) copies of the policies for the insurances described in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment] and Sub-Clause 18.3 [Insurance against Injury to Persons and Damage to Property].
- 18.1.7 When each premium is paid, the insuring Party shall submit evidence of payment to the other Party. Whenever evidence or policies are submitted, the insuring Party shall also give notice to the Engineer.
- 18.1.8 Each Party shall comply with the conditions stipulated in each of the insurance policies. The insuring Party shall keep the insurers informed of any relevant changes to the execution of the Works and ensure that insurance is maintained in accordance with this Clause.
- 18.1.9 Neither Party shall make any material alteration to the terms of any insurance without the prior approval of the other Party. If an insurer makes (or attempts to make) any alteration, the Party first notified by the insurer shall promptly give notice to the other Party.
- 18.1.10 If the insuring Party fails to effect and keep in force any of the insurances it is required to effect and maintain under the Contractor fails to provide satisfactory evidence and copies of policies in accordance with this Sub- Clause, the other Party may (at its option and without prejudice to any other right or remedy) effect insurance for the relevant coverage and pay the premiums due. The insuring Party shall pay the amount of these premiums to

the other Party, and the Contract Price shall be adjusted accordingly.

- 18.1.11 Nothing in this Clause limits the obligations, liabilities or responsibilities of the Contractor or the Procuring Entity, under the other terms of the Contractor otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor and/or the Procuring Entity.
- 18.1.12 If the insuring Party fails to effect and keep in force an insurance which is available and which it is required to be effected and maintained under the Contract, and the other Party neither approves the omission nor effects insurance for the coverage relevant to this default, any moneys which should have been recoverable under this insurance shall be paid by the insuring Party.
- 18.1.13 Payments by one Party to the other Party shall be subject to Sub-Clause 20.2 [Procuring Entity's Claims] or Sub-Clause 20.1 [Contractor's Claims], as applicable.
- 18.1.14 The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to the insurance referred to Clause 18) with insurers from any eligible source country.

18.2 Insurance for Works and Contractor's Equipment

- 18.2.1 The insuring Party shall insure the Works, Plant, Materials and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit. This insurance shall be effective from the date by which the evidence is to be submitted under Sub-Clause 18.1 [General Requirements for Insurances], until the date of issue of the Taking-Over Certificate for the Works.
- 18.2.2 The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [Defects Liability]).
- 18.2.3 The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.
- 18.2.4 Unless otherwise stated in the Special Conditions, insurances under this Sub-Clause:
- a) Shall be effected and maintained by the Contractor as insuring Party,
 - b) shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated to the Party actually bearing the costs of rectifying the loss or damage,
 - c) shall cover all loss and damage from any cause not listed in Sub-Clause 17.3 [Procuring Entity's Risks],
 - d) shall also cover, to the extent specifically required in the tendering documents of the Contract, loss or damage to a part of the Works which is attributable to the use or occupation by the Procuring Entity of another part of the Works, and loss or damage from the risks listed in sub-paragraphs (c) and (g) of Sub-Clause 17.3 [Procuring Entity's Risks], excluding (in each case) risks which are not insurable at commercially reasonable terms, with deductibles per occurrence of not more than the amount stated **in the Special Conditions** of Contract (if an amount is not so stated, this sub-paragraph (d) shall not apply), and
 - e) may however exclude loss of, damage to, and reinstatement of:
 - i) a part of the Works which is in a defective condition due to a defect in its design, materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in

sub-paragraph (ii) below),

- ii) a part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, materials or workmanship,
- iii) apart of the Works which has been taken over by the Procuring Entity, except to the extent that the Contractor is liable for the loss or damage, and
- iv) Goods while they are not in Kenya, subject to Sub-Clause 14.5 [Plant and Materials intended for the Works].

18.2.5 If, more than one year after the Base Date, the cover described in sub-paragraph (d) above ceases to be available at commercially reasonable terms, the Contractor shall (as insuring Party) give notice to the Procuring Entity, with supporting particulars. The Procuring Entity shall then (i) be entitled subject to Sub-Clause 20.2 [Procuring Entity's Claims] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 18.1 [General Requirements for Insurances].

18.3 Insurance against Injury to Persons and Damage to Property

18.3.1 The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment]) or to any person (except persons insured under Sub-Clause 18.4 [Insurance for Contractor's Personnel]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.

18.3.2 This insurance shall be for a limit per occurrence of not less than the amount stated in **the Special Conditions of Contract**, with no limit on the number of occurrences. If an amount is not stated in the **Special Conditions of Contract**, this Sub-Clause shall not apply.

18.3.3 Unless otherwise stated in the Special Conditions, the insurances specified in this Sub-Clause:

- a) Shall be effected and maintained by the Contractor as insuring Party,
- b) shall be in the joint names of the Parties,
- c) shall be extended to cover liability for all loss and damage to the Procuring Entity's property (except things insured under Sub-Clause 18.2) arising out of the Contractor's performance of the Contract, and
- d) may however exclude liability to the extent that it arises from:
 - i) the Procuring Entity's right to have the Permanent Works executed on, over, under, in or
 - ii) through any land, and to occupy this land for the Permanent Works,
 - iii) damage which is an unavoidable result of the Contractor's obligations to execute the
 - iv) Works and remedy any defects, and
 - v) a cause listed in Sub-Clause 17.3 [Procuring Entity's Risks], except to the extent that cover is available at commercially reasonable terms.

18.4 Insurance for Contractor's Personnel

18.4.1 The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel.

18.4.2 The insurance shall cover the Procuring Entity and the Architect against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the

Contractor's Personnel, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Procuring Entity or of the Procuring Entity's Personnel.

- 18.4.3 The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

19.0 FORCE MAJEURE

19.1 Definition of Force Majeure

- 19.1.1 In this Clause, "Force Majeure" means an exceptional event or circumstance:
- a) Which is beyond a Party's control,
 - b) Which such Party could not reasonably have provided against before entering into the Contract,
 - c) which, having arisen, such Party could not reasonably have avoided or overcome, and
 - d) which is not substantially attributable to the other Party.
- 19.1.2 Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:
- a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
 - b) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,
 - c) riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel,
 - d) munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, and
 - e) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

19.2 Notice of Force Majeure

- 19.2.1 If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.
- 19.2.2 The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.
- 19.2.3 Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

19.3 Duty to Minimize Delay

Each Party shall at all times use all reasonable endeavors to minimize any delay in the performance of the Contract as a result of Force Majeure. A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.

19.4 Consequences of Force Majeure

- 19.4.1 If the Contractor is prevented from performing his substantial obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], and suffers delay and/ or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-

- Clause 8.4 [Extension of Time for Completion], and
- b) if the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 19.1 [Definition of Force Majeure] and, in sub-paragraphs (ii) to (iv), occurs in Kenya, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment].

19.4.2 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

19.5 Force Majeure Affecting Subcontractor

If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader force majeure events or circumstances shall not excuse the Contractor's non-performance or entitle him to relief under this Clause.

19.6 Optional Termination, Payment and Release

- 19.6.1 If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment].
- 19.6.2 Upon such termination, the Architect shall determine the value of the work done and issue a Payment Certificate which shall include:
- a) The amounts payable for any work carried out for which a price is stated in the Contract;
 - b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Procuring Entity when paid for by the Procuring Entity, and the Contractor shall place the same at the Procuring Entity's disposal;
 - c) other Cost or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;
 - d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and
 - e) the Cost of repatriation of the Contractor's staff and lab or employed wholly in connection with the Works at the date of termination.

19.7 Release from Performance

Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance;

- a) The Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and
- b) The sum payable by the Procuring Entity to the Contractor shall be the same as would have been payable under Sub-Clause 19.6 [Optional Termination, Payment and

Release] if the Contract had been terminated under Sub-Clause 19.6.

20.0 SETTLEMENT OF CLAIMS AND DISPUTES

20.1 Contractor's Claims

- 20.1.1 If the Contractor considers itself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give Notice to the Engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 30 days after the Contractor became aware, or should have become aware, of the event or circumstance.
- 20.1.2 If the Contractor fails to give notice of a claim within such period of 30 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Procuring Entity shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply.
- 20.1.3 The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.
- 20.1.4 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer. Without admitting the Procuring Entity's liability, the Architect may, after receiving any notice under this Sub-Clause, monitor the record-keeping and/ or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Architect to inspect all these records and shall (if instructed) submit copies to the Engineer.
- 20.1.5 Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Architect fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/ or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:
- a) This fully detailed claim shall be considered as interim;
 - b) The Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/ or amount claimed, and such further particulars as the Architect may reasonably require; and
 - c) The Contractor shall send a final claim within 30 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer.
- 20.1.6 Within 42 days after receiving a Notice of a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Architect and approved by the Contractor, the Architect shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars but shall nevertheless give his response on the principles of the claim within the above defined time period.
- 20.1.7 Within the above defined period of 42 days, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.
- 20.1.8 Each Payment Certificate shall include such additional payment for any claim as has been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the

Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.

20.1.9 If the Architect does not respond within the time frame defined in this Clause, either Party may consider that the claim is rejected by the Architect and any of the Parties may refer the dispute for amicable settlement in accordance with Clause 20.3.

20.1.10 The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/ or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause 20.3.

20.2 Procuring Entity's Claims

20.2.1 If the Procuring Entity considers itself to be entitled to any payment under any Clause of these Conditions or otherwise in connection with the Contract, and/or to any extension of the Defects Notification Period, the Procuring Entity or the Architect shall give notice and particulars to the Contractor. However, notice is not required for payments due under Sub-Clause 4.19 [Electricity, Water and Gas], under Sub-Clause 4.20 [Procuring Entity's Equipment and Free-Issue Materials], or for other services requested by the Contractor.

20.2.2 The notice shall be given as soon as practicable and no longer than 30 days after the Procuring Entity became aware, or should have become aware, of the event or circumstances giving rise to the claim. A notice relating to any extension of the Defects Notification Period shall be given before the expiry of such period.

20.2.3 The particulars shall specify the Clause or other basis of the claim and shall include substantiation of the amount and/or extension to which the Procuring Entity considers itself to be entitled in connection with the Contract. The Architect shall then proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the amount (if any) which the Procuring Entity is entitled to be paid by the Contractor, and/ or (ii) the extension (if any) of the Defects Notification Period in accordance with Sub-Clause 11.3 [Extension of Defects Notification Period].

20.2.4 This amount may be included as a deduction in the Contract Price and Payment Certificates. The Procuring Entity shall only be entitled to set off against or make any deduction from an amount certified in a Payment Certificate, or to otherwise claim against the Contractor, in accordance with this Sub-Clause.

20.3 Amicable Settlement

Where a notice of a claim has been given, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, the Party giving a notice of a claim in accordance with Sub-Clause 20.1 above should move to commence arbitration after 60 days from the day on which a notice of a claim was given, even if no attempt at an amicable settlement has been made.

20.4 Matters that may be referred to arbitration

Notwithstanding anything stated herein the following matters may be referred to arbitration before the practical completion of the Works or abandonment of the Works or termination of the Contract by either party:

- a) Whether or not the issue of an instruction by the Architect is empowered by these Conditions.
- b) Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
- c) Any dispute arising in respect risks arising from matters referred to in Clause 17.3 and

Clause 19.

- e) All other matters shall only be referred to arbitration after the completion or alleged completion of the Works or termination or alleged termination of the Contract, unless the Procuring Entity and the Contractor agree otherwise in writing.

20.5 Arbitration

- 20.5.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 20.3 shall be finally settled by arbitration.
- 20.5.2 No arbitration proceedings shall be commenced on any claim or dispute where notice of a claim or dispute has not been given by the applying party within ninety days of the occurrence or discovery of the matter or issue giving rise to the dispute.
- 20.5.3 Notwithstanding the issue of a notice as stated above, the arbitration of such a claim or dispute shall not commence unless an attempt has in the first instance been made by the parties to settle such claim or dispute amicably with or without the assistance of third parties. Proof of such attempt shall be required.
- 20.5.4 The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be desirable in order to determine the rights of the parties and assess and award any sums which ought to have been the subject of or included in any certificate.
- 20.5.5 The Arbitrator shall, without prejudice to the generality of his powers, have powers to open up, review and revise any certificate, opinion, decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion, decision requirement or notice had been given.
- 20.5.6 The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Architect from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.
- 20.5.7 Neither Party shall be limited in the proceedings before the arbitrators to the evidence, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction.
- 20.5.7 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Architect shall not be altered by reason of any arbitration being conducted during the progress of the Works.
- 20.5.8 The terms of the remuneration of each or all the members of Arbitration shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

20.6 Arbitration with National Contractors

- 20.6.1 If the Contracts with national contractors, arbitration proceedings will be conducted in accordance with the Arbitration Laws of Kenya. In case of any claim or dispute, such claim or dispute shall be notified in writing by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within thirty days of the notice. The dispute shall be referred to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed, on the request of the applying party, by the Chairman or Vice Chairman of any of the following professional institutions;
 - i) Architectural Association of Kenya
 - ii) Institute of Quantity Surveyors of Kenya

- iii) Association of Consulting Engineers of Kenya
- iv) Chartered Institute of Arbitrators (Kenya Branch)
- v) Institution of Engineers of Kenya

20.6.2 The institution written to first by the aggrieved party shall take precedence over all other institutions.

20.7 Arbitration with Foreign Contractors

20.7.1 Arbitration with foreign contractors shall be conducted in accordance with the arbitration rules of the United Nations Commission on International Trade Law (UNCITRAL); or with proceedings administered by the International Chamber of Commerce (ICC) and conducted under the ICC Rules of Arbitration; by one or more arbitrators appointed in accordance with said arbitration rules.

20.7.2 The place of arbitration shall be a location specified in the **SCC**; and the arbitration shall be conducted in the language for communications defined in Sub-Clause 1.4 [Law and Language].

20.8 Alternative Arbitration Proceedings

Alternatively, the Parties may refer the matter to the Nairobi Centre for International Arbitration (NCIA) which offers a neutral venue for the conduct of national and international arbitration with commitment to providing institutional support to the arbitral process.

20.9 Failure to Comply with Arbitrator's Decision

20.9.1 The award of such Arbitrator shall be final and binding up on the parties.

20.9.2 In the event that a Party fails to comply with a final and binding Arbitrator's decision, then the other Party may, without prejudice to any other rights it may have, refer the matter to a competent court of law.

20.10 Contract operations to continue

20.11 Notwithstanding any reference to arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and the Procuring Entity shall pay the Contractor any monies due the Contractor.

Special Conditions of Contract

The following Special Conditions shall supplement the GCC. Whenever there is a conflict, the provisions here in shall prevail over those in the GCC.

Conditions	Sub-Clause	Data
Procuring Entity's name and address	Heading	Embassy of the Republic of Kenya, P.O. BOX 3301, Yeka KK, Kebele 01, ADDIS ABABA, ETHIOPIA.
Name and Reference No. of the Contract	Heading and 1.1	Proposed Refurbishment Works to Kenya Embassy in Addis Ababa – Ethiopia.
Local Currency	1.1	US. Dollars
Engineer's Name and Address	Heading and 3.1.1	"Works Secretary State Department for Public Works, Ministry of Lands, Public Works, Housing and Urban Development P.O. Box 30743-00100 NAIROBI
Contractor's Representative's Name	4.3.1	 (Insert Contractor's Representative agreed by the Procuring entity prior to contract signature)
Key personnel names	16.9.1	 (Insert Contractor's main key personnel agreed by contract signature)
Time for completion	1.1	Fifty Two (52) Weeks after commencement
Defects notification period	1.1	Immediately
Sections	1.1	If sections are to be used, refer to table: Summary of sections below
Compliance with laws	1.13	Compliance with the laws means compliance with the laws of the Federal Democratic Republic of Ethiopia governing construction works
Electronic submission systems	1.3	SHALL NOT be Applicable
Law and Language	1.4	(a) Delete ' <i>the contract shall be governed by laws of Kenya</i> ' and ' <i>insert the contract shall be governed by laws of the Federal Democratic Republic of Ethiopia</i> '
Inspections and Audit by the procuring entity	1.15	Public Procurement Regulatory Authority means Public Procurement Regulatory Authority of the Republic of Kenya
Time for the parties entering into a contract agreement	1.6	Within 30days
Permits. Approvals or Licenses	2.2 (a), (b)	(a) Delete ' <i>copies of the Laws of Kenya which are relevant to the Contract</i> ' and insert ' <i>copies of the Laws of the Federal Democratic Republic of Ethiopia which are relevant to the Contract</i> ' (b) Delete ' <i>any Permits, Approvals or Licenses required by the Laws of Kenya</i> ' and insert ' <i>any Permits. Approvals or Licenses required by the Laws of the Federal Democratic Republic of Ethiopia</i> '

Conditions	Sub-Clause	Data
Site Data	4.10.2 (d)	Delete <i>'the Laws, procedures and labour practices of Kenya'</i> and insert <i>'the laws, procedures and labour practices of the Federal Democratic Republic of Ethiopia'</i>
Commencement date	8.1.1	To be agreed with the Project Manger
Time for access to the site	2.1	The Site Possession Date Shall be as Agreed with the Project Manager
Architect duties and authority	3.1.6 (b) (ii)	Variation resulting in an increase of the accepted contract amount shall require approval of the procuring entity
Performance security	4.2.1	The performance security will be in the form of a performance bond in the amount(s) of 5% (percent) of the accepted contract amount and in the same currency (ies) of the accepted contract amount
Foreign Personnel	6.12	Shall not apply
Alcoholic Liquor or Drugs	6.15	Delete <i>'the Laws of Kenya'</i> and Insert <i>'the Laws of the Federal Democratic Republic of Ethiopia '</i>
Prohibition of Harmful Child Labour	6.17	Delete <i>'Labour Laws of Kenya'</i> and Insert <i>'Labour Laws of the Federal Democratic Republic of Ethiopia '</i>
Normal working hours	6.5	Normal working hours shall be 8:00 a.m. to 5:00 p.m. on weekdays, including lunch break from 1.00 p.m. to 2.00 p.m. and 8:00 a.m. to 1:00 pm on Saturdays, with Sunday being set aside as a day of rest.
Delay caused by Authorities	8.5	Delete <i>'Public Authorities in Kenya'</i> and insert <i>'Public Authorities in the Federal Democratic Republic of Ethiopia '</i>
Delay damages for the work	8.7 & 14.15(b)	0.002% of the Contract Sum per week
Maximum amount of delay damages	8.7	5% of the final contract price
Defects Liability	11.0	Defects Liability Period shall be twelve (12) months from practical completion date
Payment in Applicable Currency	13.5	All payments shall be done in US. Dollars only
Adjustments for Changes in Legislation	13.8	Delete <i>'cost resulting from a change in the Laws of Kenya'</i> and insert <i>'cost resulting from a change in the Laws of the Federal Democratic Republic of Ethiopia '</i>
Adjustment for Changes in Cost	13.9.5	Delete <i>'Central Bank of Kenya'</i> and insert <i>'Central Bank of the Federal Democratic Republic of Ethiopia '</i>
Total advance payment	14.2.1	Advance Payment shall NOT be granted
Repayment amortization rate of advance payment	14.2.5 (b)	Shall not apply
Percentage of Retention	14.3.2 (c)	10 %
Limit of Retention Money	14.3.2 (c)	5% of the Accepted Contract Amount
Plant and Materials intended for the works	14.5(b)(i)	If Sub-Clause 14.5 applies: Plant and Materials for payment Free on Board
	14.5(C)(i)	Plant and Materials for payment when delivered to the Site
	14.5(d)(ii)	Delete <i>'relevant plant and materials have been shipped to Kenya'</i> and insert <i>'relevant plant and materials have been shipped to Ethiopia'</i>

Conditions	Sub-Clause	Data
Minimum Amount of Interim Payment Certificates	14.6	N/A
Publishing source of commercial interest rates for financial charges in case of delayed payment	14.8.2	Delete ' <i>Central Bank in Kenya</i> ' and insert ' <i>Central Bank in the Federal Democratic Republic of Ethiopia</i> '
Publishing source of commercial interest rates for financial charges in case of payment currencies	14.15	Delete ' <i>Central Bank in Kenya</i> ' and insert ' <i>Central Bank in the Federal Democratic Republic of Ethiopia</i> '
Fraud and Corruption	15.6	Delete ' <i>Contractor shall ensure compliance with the Kenya Government's Anti-Corruption Laws and its prevailing sanctions</i> ' and insert ' <i>Contractor shall ensure compliance with the Kenya Government's Anti-Corruption Laws and its prevailing sanctions</i> '
Corrupt gifts and payment of commission	15.7.2	Delete ' <i>Anti-Corruption and Economic Crimes Act (2003) of the Laws of Kenya</i> ' and insert ' <i>Anti-Corruption and Economic Crimes Act or provision in the laws of the Federal Democratic Republic of Ethiopia</i> '
Procuring entities risks	17.3	Delete ' <i>execution of works in Kenya</i> 'and insert <i>execution of works in Ethiopia</i> '
Periods for submission of insurance: a. Evidence of insurance. b. Relevant policies	18.1.6	14 days 14 days
Maximum number of deductibles for insurance of the Procuring Entity's risks	18.2.4 (d)	As per the policy in the Federal Democratic Republic of Ethiopia
Minimum amount of third-party insurance	18.3.2	As per the policy
Consequences of force majeure	19.4.1 (b)	Delete ' <i>occurs in Kenya</i> ' and insert ' <i>occurs in Ethiopia</i> '
The place of arbitration	20.7.2	Nairobi, Kenya.

CONTRACT FORMS

FORM No. 1 - NOTIFICATION OF INTENTION TO AWARD

FORM No. 2 - NOTIFICATION OF AWARD - LETTER OF ACCEPTANCE

FORM No. 3 - CONTRACT AGREEMENT

FORM No. 4 - PERFORMANCE SECURITY [Option 1 - Unconditional Demand Bank Guarantee]

FORM No 1: NOTIFICATION OF INTENTION TO AWARD OF CONTRACT

This Notification of Award shall be sent to each Tenderer that submitted a Tender and was not successful. Send this Notification to the Tenderer's Authorized Representative named in the Tender Information Form on the format below.

FORMAT

1. For the attention of Tenderer's Authorized Representative

- i) Name: *[insert Authorized Representative's name]*
- ii) Address: *[insert Authorized Representative's Address]*
- iii) Telephone: *[insert Authorized Representative's telephone/fax numbers]*
- iv) Email Address: *[insert Authorized Representative's email address]*

[IMPORTANT: insert the date that this Notification is transmitted to Tenderers. The Notification must be sent to all Tenderers simultaneously. This means on the same date and as close to the same time as possible.]

2. Date of transmission: *[email]* on *[date]* (local time)

This Notification is sent by *(Name and designation)*

3. Notification of Award

- i) Procuring Entity: *[insert the name of the Procuring Entity]*
- ii) Project: *[insert name of project]*
- iii) Contract title: *[insert the name of the contract]*
- iv) ITT No: *[insert ITT reference number from Procurement Plan]*

This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract.

The transmission of this Notification begins the Standstill Period. During the Standstill Period, you may:

4. Request a debriefing in relation to the evaluation of your tender by submitting a Procurement-related Complaint in relation to the decision to award the contracts.

a) The successful tenderers

- i) Name of successful Tender
-

- ii) Address of the successful Tender
-
-

- iii) Contract price of the successful Tender US. Dollars
-

(in words _____)

b) The reasons for your tender being unsuccessful are as follows:

c) Other Tenderers

Names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out.

SNo	Name of Tender	Tender Price as read out	Tender's evaluated price (Note a)	One Reason Why Not Evaluated
1				
2				

(Note a) State NE if not evaluated

5. How to request a debriefing

- a) DEADLINE: The dead line to request a debriefing expires at midnight on *[insert date]* (local time).
- b) You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (5) Business Days of receipt of this Notification of Intention to Award.
- c) Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:
 - i) Attention: *[insert full name of person, if applicable]*
 - ii) Title/position: *[insert title/position]*
 - iii) Agency: *[insert name of Procuring Entity]*
 - iv) Email address: *[insert email address]*
- d) If your request for a debriefing is received within the 3 Days deadline, we will provide the debriefing within five (3) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (3) Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.
- e) The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.
- f) If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Days from the date of publication of the Contract Award Notice.

6. How to make a complaint?

- a) Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, *[insert date]* (local time).
- b) Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement-related Complaint as follows:
 - i) Attention: *[insert full name of person, if applicable]*
 - ii) Title/position: *[insert title/ position]*
 - iii) Agency: *[insert name of Procuring Entity]*
 - iv) Email address: *[insert email address]*
- c) At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.
- d) Further information: For more information, refer to the Public Procurement and Disposals Act 2015 and its Regulations available from the Website www.ppra.go.ke. You should read these documents before preparing and submitting your complaint.
- e) There are four essential requirements:

- i) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process and is the recipient of a Notification of Intention to Award.
- ii) The complaint can only challenge the decision to award the contract.
- iii) You must submit the complaint within the period stated above.
- iv) You must include, in your complaint, all of the information required to support your complaint.

7. Standstill Period

- i) DEADLINE: The Standstill Period is due to end at midnight on [*insert date*] (local time).
- ii) The Standstill Period lasts ten (14) Days after the date of transmission of this Notification of Intention to Award.
- iii) The Standstill Period may be extended as stated in paragraph Section 5(d) above.

If you have any questions regarding this Notification please do not hesitate to contact us. On behalf of the Procuring Entity:

Signature:

Name:

Title/position:

Telephone: _

FORM NO 2: LETTER OF AWARD

[letterhead paper of the Procuring

Entity] [date]

To: *[name and address of the Contractor]*

This is to notify you that your Tender dated *[date]* for execution of the *[name of the Contract and identification number, as given in the Contract Data]* for the Accepted Contract Amount *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Tenderers, is here by accepted by..... *(name of Procuring Entity)*.

You are requested to furnish the Performance Security within in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms included in Section VIII, Contract Forms, of the Tender Document.

Authorized Signature:

Name and Title of Signatory:

Name of Procuring Entity:

Attachment: *Contract Agreement:*

FORM NO 3: CONTRACT AGREEMENT

THIS AGREEMENT made the day of..... 20....., between.....
.....of..... (hereinafter “the Procuring
Entity”), of the one part, and.....of.....(hereinafter
“the Contractor”), of the
other part:

WHEREAS the Procuring Entity desires that the Works known as.....should
be executed by the Contractor, and has accepted a Tender by the Contractor for the execution and completion
of these Works and the remedying of any defects there in,

The Procuring Entity and the Contractor agree as
follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them
in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement.
This Agreement shall prevail over all other Contract documents.
 - a) the Notification of Award
 - b) the Form of Tender
 - c) the addenda Nos..... (if any)
 - d) the Special Conditions of Contract
 - e) the General Conditions of Contract;
 - f) the Specifications
 - g) the Drawings; and
 - h) the completed Schedules and any other documents forming part of the contract.
3. In consideration of the payments to be made by the Procuring Entity to the Contractor as specified
in this Agreement, the Contractor here by covenants with the Procuring Entity to execute the Works and
to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Procuring Entity here by covenants to pay the Contractor in consideration of the execution and
completion of the Works and the remedying of defects there in, the Contract Price or such other sum as
may become payable under the provisions of the Contract at the times and in the manner prescribed by
the Contract.

INWITNESS where of the parties here to have caused this Agreement to be executed in accordance with
the
Laws of Kenya on the day, month and year specified above.

Signed and sealed by.....(for the Procuring
Entity)

Signed and sealed by.....(for the Contractor).

FORM NO. 4 - PERFORMANCE SECURITY (To be on the issuing Authority's Letterhead)

[Option 1 - Unconditional Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: [insert name and Address of Procuring Entity]

Date: _____[Insert date of issue]

Guarantor: [Insert name and address of place of issue, unless indicated in the letterhead]

1. We have been informed that _____ (hereinafter called "the Contractor") has entered into Contract No. _____ dated with (name of Procuring Entity) _____ (the Procuring Entity as the Beneficiary), for the execution of _____ (Hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.
3. At the request of the Contractor, we as Guarantor, here by irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (in words),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.
4. This guarantee shall expire, no later than the.....Day of.....,2.....², and any demand for payment under it must be received by us at the office indicated above on or before that date.
5. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."
.....

[Name of Authorized Official, signature(s) and seals/stamps]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

¹ The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency of the Contract or a freely convertible currency acceptable to the Beneficiary.

² Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.

SECTION IV: BILLS OF QUANTITIES

PREAMBLES AND PRICING NOTES

A. GENERALLY

All work to be carried out in accordance with the Ministry of Roads, Public Works and Housing General Specifications for Building Works issued in 1976 or as qualified or amended.

B. MANUFACTURERS' NAMES

Where manufacturers' names and catalogue references are given for guidance to quality and standard only, alternative manufacturer of equal quality will be accepted at the discretion of the Project Manager.

C. WALLING

All precast concrete blocks shall be manufactured by the methods and to the sizes specified in the Ministry of Roads, Public Works and Housing "Specification for Metric Sized Concrete Blocks for Building (1972)"

Walling of 100 mm thickness or under shall be reinforced with hoop iron every alternate course.

Prices for walling must allow for all costs in preparing, packing and sending sample blocks for testing as and when required by the Project Manager.

D. CARPENTRY

The grading rules for cypress shall be the same as for podocarpus and all timber used for structural work shall be select (second grade).

All structural timber must conform to the minimum requirements for moisture content and preservative treatment and timber prices must allow for preparing, packing and sending samples for testing when required.

Prices must also include for all nails and fasteners

E. JOINERY

Cypress for joinery shall be second grade in accordance with the latest grading rules of the Ethiopia Government.

Where Mahogany is specified, this refers to prime grade only. The Contractor may with the approval of the Project Manager, use either Msharagi or Mvuli in lieu of Mahogany but such approval will be given only in the case of shortages of the hardwoods specified.

Plugging shall be carried out by drilling walling or concrete with masonry drill and filling with propriety plugs of the correct sizes. Cutting with hammer and chisel will not be allowed.

Prices for joinery must include for pencil rounded arises, protection against damage, nails, screws, framing and bedding in cement mortar as required.

Sizes given for joinery items are nominal sizes and exact dimensions of doors, etc, must be ascertained on site.

A. IRONMONGERY

Ironmongery shall be as specified in the Bills of Quantities or equal and approved.

Prices must include for removing and re-fixing during and after painting, labeling all keys, and for fixing to hardwood, softwood, concrete or blockwork.

Catalogue references given for ironmongery are for purposes of indicating quality and size of item(s). Should the Contractor wish to substitute the specified item(s) with others of equal quality, he must inform the Project Manager and obtain approval in writing.

B. STRUCTURAL STEELWORK

All structural steelwork shall comply with the Ministry of Public Works "Structural Steelwork Specification (1973) and shall be executed by an approved Sub-contractor.

C. A. PLASTERWORK AND OTHER FINISHES

All finishing's shall be as described in the general specifications and in these Bills of Quantities.

Prices for pavings are to include for brushing concrete clean, wetting and coating with cement and sand grout 1:1.

Rates for glazed wall tiling are to include for a 12 mm cement and sand (1:4) backing screed unless otherwise specified in these Bills of Quantities.

D. B. GLAZING

Where polished plate glass is specified, this refers to general glazing quality.

Prices for glazing shall include for priming of rebates before placing putty.

The Contractor will be responsible for replacing any broken or scratched glass and handing over in perfect condition.

E. PAINTING

All paint shall be 1st quality "Crown" or other equal and approved

Painting shall be applied in accordance with the manufacturers' instructions.

Prices for painting are to include for scaffolding, preparatory work, priming coats, protection of other works and for cleaning up on completion. Prices for painting on galvanized metal are to include for mordant solution as necessary.

ABBREVIATIONS

LM wherever used in this document shall mean Linear Metre

SM wherever used in this document shall mean Square Metre

NO wherever used in this document shall mean Number

USD wherever used in this document shall mean US. Dollars

ITT wherever used in this document shall mean Instructions To Tenderers

TDS wherever used in this document shall mean Tender Data Sheet

GCC wherever used in this document shall mean General Conditions of Contract

SCC wherever used in this document shall mean Special Conditions of Contract

**BILL NO. 1-
PRELIMINARIES**

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

[illegible]

**BILL NO. 2-
CHANCERY**

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u><i>All the works herein below are measured provisionally and hence subject to actual measurements upon execution.</i></u> <u>ELEMENT NO. 1</u> <u>DEMOLITIONS & ALTERATIONS</u> <u><i>Carefully demolish/remove, cart away/store, and make good disturbed surfaces as directed:</i></u> <u><i>All demolitions to include making good disturbed surfaces</i></u> <u>Roofing</u> A Remove existing roofing sheets with including roof structure and hand over to the client and make good all dsturbed surfaces (Approx. 830 SM) B Remove leaking water proofing membrane to roofing slab; cart away debris and make good surface to receive new water proofing membrane (Approx. 830 SM) C Hack off existing roof cement/sand screed and cart away (Approx. 830 SM) <u>Partitions</u> D Carefully take down existing timber partition walling thickness 100mm thick; make good disturbed surfaces and hand over arisings to client (Approx. area 15.0 SM) E Carefully take down existing timber partition walling thickness 100mm thick; make good disturbed surfaces and hand over arisings to client (Approx. area 17.0 SM) F Carefully remove existing aluminium framed glass partition; make good disturbed surfaces and hand over arisings to client (Approx. area 42.0 SM) G Carefully remove existing timber curved bar counter, hand over arisings to the client and make good all disturbed surfaces (Approx. Curved length 9.0 LM) H Carefully demolish existing 200 mm thick masonry wall, make good all disturbed surfaces and cart away all debris arising as directed (Approx. 17.0 SM) J Carefully demolish existing 100 mm thick masonry wall, make good all disturbed surfaces and cart away all debris arising as directed (Approx. 17.0 SM) <u>Floor finishes</u> <u>Remove carefully the following finishings, load, make good disturbed surfaces and cart away all debris as directed:</u> K Hack off existing floor tiles and skirtings including cement sand screed paving and cart away debris as directed (Approx. area 80.0 SM)				
	Carried to Collection				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
A	Carefully strip off existing office carpet and associated underfelt and timber skirting, rub, scrap, dust off and clean the surfaces including hovering, vacuuming, hand over arisings to the client and prepare surfaces to receive new carpet; (Approx. area 390.0 SM) <u>Wall finishes</u>		ITEM		
B	Hack wall tiles jointed in and including cement sand screed backing and cart away debris (Approx. area 70 SM)		ITEM		
C	Hack dilapidated wall finish including cement sand screed backing and cart away debris (Approx. area 30 SM) - Fire exit staircase <u>Windows</u>		ITEM		
D	Carefully remove and take down cracked and broken glass panes and cart away (Approx. area 6 SM)		ITEM		
E	Carefully take down dilapidated blinds complete with accessories and cart away (Approx. area 250 SM)		ITEM		
F	Carefully remove existing 3 No. aluminium framed windows overall size 4800 x 1400 mm high including glazing, hand over to the client and make good disturbed surfaces for new windows <u>Doors</u>		ITEM		
G	Carefully remove existing mild steel grille to doors on ground floor, hand over all arisings to the client and make good all disturbed surfaces (Approx. Area 89.0 SM)		ITEM		
H	Carefully remove existing 2No. aluminium framed doors overall size 2400 x 2400 mm high, hand over all arisings to the client and make good all disturbed surfaces		ITEM		
J	Carefully remove existing 1No. aluminium framed doors overall size 900 x 2400 mm high, hand over all arisings to the client and make good all disturbed surfaces to receive timber paneled door		ITEM		
K	Carefully remove existing 21No. timber sliding doors overall size 900 x 2100 mm high, including frames and sliding gears, hand over all arisings to the client and make good all disturbed surfaces to receive new doors <u>Staircase</u>		ITEM		
L	Hack off existing floor finish and skirtings including cement sand screed paving at the fire exit staircase and cart away debris as directed (Approx. area 15.0 SM)		ITEM		
M	Carefully remove existing PVC skirting on the main staircase steps and cart away debris as directed (Approx. area 27.0 LM)		ITEM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Collection</u> Brought forward from page AAE/CH/1 Brought forward from page AAE/CH/2				
	DEMOLITION AND ALTERATIONS CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

[illegible]

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
A	ELEMENT NO. 3 <u>WALLING & PARTITIONS</u> <u>Masonry Walling</u> <u>Approved load bearing medium chisel dressed natural stone walling bedded and jointed in cement sand (1:3) mortar.with 20 mm wide hoop irons in every alternate course.</u> 200mm thick walling	53	SM		
B	<u>Gypsum Drywall Partitions</u> 100 mm Thick dry wall consisting of 2 No. 12mm thick gypsum plasterboard sheets both faces; fixed to bottom, top complete in approved aluminium channels and all necessary fixing accessories to approval	117	SM		
C	<u>Glass Partitions</u> 12 mm Thick laminated glass fixed in stainless steel joints and frame where required; complete with all fixing accessories	42	SM		
D	<u>Aluminium Foldable Partition</u> <u>Supply, assemble and fix the following purpose-made powder coated aluminium framed foldable and partitions to B.S. 3987, 1984 to Booth Standard extruded profiles complete with 10 mm thick glass infills as detailed on drawings with all necessary ironmongery. All doors to have permanent vents, approved door closers and all necessary ironmongery. Allow for sand blast effect film as directed</u> 4600 x 2700 mm High double folding partition	3	NO.		
	WALLING CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>ELEMENT NO. 4</u>				
	<u>DOORS</u>				
	<u>Frameless glass door</u>				
A	Supply and fix 12 mm thick toughened glass frameless double swing glass door overall size 1200 x 2400 mm high in 2 No. leaves complete with approved hinges to match, Cylinder Deadlock, 2 No. 1000 mm long brushed stainless steel pull handles to approval, doorstops and 8 No. double action floor springs with hold on facility to suit frameless glass door including all necessary ironmongery, all to Architect's Detail	2	NO.		
	<u>Burglar Proofing Grilles</u>				
B	Galvanised mild steel grille framed burglar proofing in 40 x 25 x 3 mm RHS horizontal mid-member and infilled with 20 mm dia. CHS intermediate vertical members at 150 mm centres. Allow for main frame and fixing to openings, cutting and pinning to concrete or blockwork and bedding frame in cement and sand mortar (1:4) to architect's detail.	17	SM		
	<u>Re-Decoration</u>				
C	Scrub defective existing decoration to prepare surface to receive new paint cart, away arising and make good and prepare and apply two coats premium quality gloss paint to existing surfaces of metal doors (both sides measured)	80	SM		
	<u>Aluminium doors</u>				
D	Allow for any repairs, greasing, and replacement of any ironmongery to aluminium casement doors (4No.)		ITEM		
	<u>Timber Flush doors</u>				
	<u>Re-Decoration</u>				
E	Scrub defective existing decoration to prepare surface to receive new finish; cart away arising and make good and prepare and apply two coats premium quality varnish to existing surfaces of timber	80	SM		
	<u>Door frames and finishings</u>				
	<u>Wrought cedar/mahogany timber in :-</u>				
F	200 x 50 mm thick frame with two labours; plugged	163	LM		
G	45 x 38mm architrave with one labour	163	LM		
H	25 x 25mm quadrant beading	163	LM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>50mm thick wrot mahogany panelled doors comprising of 150 x 50mm thick stiles and top rail; 150 x 50mm thick middle and bottom rail</u>				
A	Double leaf door size 1200 x 2100 mm high	1	NO.		
B	Double leaf door size 900 x 2100 mm high	1	NO.		
C	Double leaf door size 800 x 2100 mm high	1	NO.		
D	Single leaf door size 900 x 2100 mm high	29	NO.		
	<u>Fire-rated 45 mm thick solid core flush doors to BS 459: part 2, faced both sides with 6mm interior quality plywood hardwood veneered for polishing and lipped on all edges in hardwood, including all planted mouldings complete with panic escape hardware, fire exit signage and fire exit keep clear push bar to open</u>				
E	Double leaf door size 2200 x 2100 mm high	1	NO.		
	<u>Ironmongery</u>				
	<u>Supply and fix the following ironmongery as per Union or other equal and approved manufacturer(s) catalogue including matching fixing screws:</u>				
F	100mm brass butt hinges	53	PRS		
G	3-lever mortice lock complete with set lever handle furniture Ref. Union 2295	32	NO		
H	38mm diameter rubber door stop rawl bolted onto floor or wall	35	NO		
J	800 x 200mm wide kicking plate Ref. KP-800-200-SS	30	NO		
	<u>Painting and decorating</u>				
	<u>Prepare and apply two coats aluminium wood primer on back of timber from a reputable and approved manufacturer before fixing to:-</u>				
K	Surfaces not exceeding 100mm girth	326	LM		
L	Surfaces over 200mm but not exceeding 300mm girth	163	LM		
	<u>Knot, prime and stop, prepare and apply two undercoats and one finishing coat of varnish from a reputable and approved manufacturer on;</u>				
M	General surfaces of doors	129	SM		
N	Surfaces over 200mm but not exceeding 300mm girth	156	LM		
P	Ditto not exceeding 100mm girth	312	LM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Knot, prime and stop, prepare and apply one undercoat and two finishing coats of first quality gloss paint to the following surfaces</u>				
A	General surfaces of doors	9	SM		
B	Surfaces over 200mm but not exceeding 300mm girth	7	LM		
C	Ditto not exceeding 100mm girth	14	LM		
	<i>Carried to Collection</i>				
	<u>Collection</u> Brought forward from Page AAE/CH/5 Brought forward from Page AAE/CH/6 Brought down from Above				
	DOORS CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>ELEMENT NO. 5</u>				
	<u>WINDOWS</u>				
	<u>Aluminium framed windows</u>				
	<u>Anodized aluminium sections (50 x 50 x 3 mm) framed windows and accessories by approved specialist subcontractor: to Architect's approval : glazing beads bedded in mastic to concrete or blockwork surfaces with plugs and screws: with permanent aluminium louvre vents at top edge and jointed all round in mastic</u>				
A	Window overall size 4500 x 1800 mm high	3	NO.		
	<u>Glazing</u>				
B	10 mm Thick laminated sheet glass with soundproofing interlayer and glazing with tropicalised metal putty in panes:	24	SM		
	<u>5mm thick sheet glass and glazing with tropicalised metal putty in panes:</u>				
C	Clear sheet glass in panes not exceeding 0.10 square metres	5	SM		
D	Ditto but obscure glass	1	SM		
	<u>Window Blinds</u>				
E	Supply and fix first quality synthetic vertical blinds complete with decorative end caps, runners and fixing accessories to approval	250	SM		
	<u>Burglar Proofing Grilles</u>				
F	Galvanised mild steel grille framed burglar proofing in 40 x 25 x 3 mm RHS horizontal mid-member and infilled with 20 mm dia. CHS intermediate vertical members at 150 mm centres. Allow for main frame and fixing to openings, cutting and pinning to concrete or blockwork and bedding frame in cement and sand mortar (1:4) to architect's detail.	89	SM		
	<u>Painting and Decoration</u>				
	<u>On Metal work</u>				
	<u>Prepare, prime and apply two finishing coats first quality oil paint full gloss to approval to: -</u>				
G	General mild steel surfaces; both sides	178	SM		
	<u>Re-Decoration</u>				
H	Allow for greasing of tracks and attending to any defects on the aluminium casement windows overall 1800mm high (38No.)		ITEM		
J	Allow for cleaning clear sheet glazing surfaces to restore them to their original colour using approved detergents on both sides (Approx. 535 SM)		ITEM		
	WINDOWS CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>ELEMENT NO. 6</u>				
	<u>FINISHES</u>				
	<u>External Wall finishes</u>				
	<u>Re-Decoration</u>				
A	Restore the exterior finish by wire scrubbing the rendered/concrete surfaces (beams & columns)	205	SM		
B	Restore the exterior finish by wire scrubbing the rendered/concrete surfaces (fire exit staircase & protective walls)	120	SM		
C	Scrub defective existing decoration to prepare surface to receive new paint cart, away arising, make good and prepare and apply two coats premium quality exterior paint to existing plastered wall surfaces	420	SM		
D	Prepare and apply tyrolean render to walls-fire exit staircase	205	SM		
	<u>Internal Wall finishes</u>				
	<u>Plaster; 15mm thick, 2 No. coatwork, 12mm first coat of cement sand (1:3); 3mm second coat of cement and lime putty (1:9); steel trowelled to masonry walls;</u>				
E	Surfaces of walls; internally	106	SM		
	<u>Prepare and apply two undercoats and one finishing coat of premium quality silk vinyl gloss paint from a reputable and approved manufacturer on:-</u>				
F	Newly plastered wall surfaces	106	SM		
	<u>Backing screed; cement and sand (1:4) wood floated:</u>				
G	15mm thick screed backing to receive ceramic wall tiles (m/s)	160	SM		
	<u>Approved coloured porcelain wall tiles; glazed; to regular pattern, from a reputable and approved manufacturer; bedding, jointing and pointing in cement mortar (1:4); grouting joints with matching colour cement and complete with approved plastic edging;</u>				
H	8 mm Thick tiles	160	SM		
J	10mm thick plastic edging	36	LM		
K	Extra over for approved border tile; 300mm wide	35	LM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Acoustic wall panelling and padding</u>				
A	50 x 50mm thick sawn cypress timber framing at 600mm centres both ways including fixing onto concrete background.	90	SM		
B	5mm Thick plywood backing onto timber bearers (m.s)	90	SM		
C	50mm Thick high-density Accoustic foam onto plywood (m/s).	90	SM		
D	High quality rexin fabric in approved pattern complete with all necessary buttons stitched to padding and plywood backing and fixed to timber framing (padding, plywood and framing m/s).	90	SM		
	<u>Wrot mahogany or other approved hardwood with three coats varnish.</u>				
E	25mm thick moulded beading fixed on rexin and timber backing.	122	LM		
F	100x25mm thick moulded and polished dado rail on rexin and timber backing.	122	LM		
	<u>MDF cladding to columns</u>				
G	18 mm Thick cladding sheets in post formed scratch proof MDF boards, heat-wrapped in 3mm Veneer complete with all necessary grooves, aluminium strips along the joints decoration and including all requisite mounting battens; to approval	21	SM		
	<u>Re-Decoration</u>				
H	Scrub defective existing decoration to prepare surface to receive new finish; cart away arising and make good and prepare and apply two coats premium quality varnish to existing surfaces of timber	201	SM		
J	Scrub defective existing decoration to prepare surface to receive new paint; cart away arising and make good and prepare and apply two coats premium quality gloss paint to existing plastered wall surfaces	1190	SM		
K	Restore the interior finish by wire scrubbing the rendered/concrete surfaces (walls, beams & columns)	205	SM		
	<u>Floor finishes</u>				
	<u>Cement and sand (1:4) screed wood floated:</u>				
L	32mm Thick paving screeds to receive polished granito floor tiles (m.s)	530	SM		
M	Ditto 28 mm to receive polished porcelain floor tiles (m.s)	273	SM		
N	Ditto 20 mm to receive polished marble floor slabs (m.s)	16	SM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Granito floor tiles</u>				
	<u>Granito floor tiles as from a reputable and approved manufacturer bedded and jointed with matching cement and sand (1:4) mortar and flush pointed with white cement; colour quality and pattern to the PM's scheme in:</u>				
A	600 x 600 x 12 mm Thick polished granito floor tiles fixed on screed (m.s) complete with an approved tile adhesive	530	SM		
B	12 x 100mm high granito skirting	338	LM		
	<u>Porcelain tiles finish (Circulation area on first floor and washrooms)</u>				
	<u>Supply and lay approved porcelain floor tiles, commercial grade, meeting industry standards for 0.5% water absorption coefficient and PEI 4 abrasion resistance on a properly prepared screed substrate, level, plumb, and free from defects complete with approved tile adhesive suitable for porcelain tiles on approved screed; in approved pattern and grouting, tooled smooth, and cleaned to manufacturer's recommendations.</u>				
C	12 mm Thick floor tiles	245	SM		
D	20 x 100 mm High skirting	97	LM		
	<u>Carpet</u>				
E	Provide underfelt and fix with approved adhesive as 'Pattex' or other equal and approved	140	SM		
F	Provide and lay 8mm thick minimum 80% wool and 20% nylon (polyamide) fused in woven textile backing 1400/1040 g/Sm carpet, anti-soiling treated, permanently anti-static, including all necessary fixing metal clips, grippers, stoppers, complete with strip bond at edges or other equal and approved quality (colour to approval of client)	140	SM		
	<u>Wrought prime grade mahogany skirting:</u>				
G	150 x 25mm wrought mahogany skirting to detail on and including treated softwood grounds plugged	133	LM		
	<u>Painting and decorating</u>				
	<u>Prepare and apply two coats aluminium wood primer on back of timber from a reputable and approved manufacturer before fixing to:-</u>				
H	Surfaces not exceeding 100mm girth	133	LM		
	<u>Knot, prime and stop, prepare and apply two undercoats and one finishing coat of varnish from a reputable and approved manufacturer on;</u>				
J	Timber surfaces over 100mm but not exceeding 200mm girth	133	LM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Porcelain tiles finish (Fire exit staircase)</u>				
	<u>Supply and lay approved porcelain floor tiles, commercial grade, meeting industry standards for 0.5% water absorption coefficient and PEI 4 abrasion resistance on a properly prepared screed substrate, level, plumb, and free from defects complete with approved tile adhesive suitable for porcelain tiles on approved screed; in approved pattern and grouting, tooled smooth, and cleaned to manufacturer's recommendations.</u>				
A	12 mm Thick floor tiles	5	SM		
B	Ditto to approx. 300mm wide treads and fixed with and including carborandum strip.	22	LM		
C	Ditto to approx. 150mm high risers	24	LM		
D	Ditto to approx. 100mm high skirting	28	LM		
	<u>Ceiling finishes</u>				
	<u>Gypsum board ceiling</u>				
E	12mm thick gypsum boards suspended as trays over table and cut to profiles and suspended on and including stainless steel grid work and all necessary fixing accessories	283	SM		
F	150 x 25mm gypsum/stryopor decorative cornice with three labours plugged size	123	LM		
	<u>Painting and decorating</u>				
	<u>Prepare and apply two undercoats and one finishing coat of premium quality emulsion paint from a reputable and approved manufacturer on:</u>				
G	Soffites of gypsum board ceiling	283	SM		
H	Gypsum decorative surfaces over 100 mm but not exceeding 200 mm girth	123	LM		
	<u>Re-Decoration</u>				
J	Scrub defective existing decoration to prepare surface to receive new paint; cart away arising and make good and prepare and apply two coats premium quality emulsion paint to existing plastered ceiling soffites	1788	SM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>External staircase</u> <u>Marble floor slabs as from a reputable and approved manufacturer bedded and jointed with matching cement and sand (1:4) mortar and flush pointed with white cement; colour quality and pattern to the PM's scheme in:</u>				
A	20 mm Thick polished marble floor tiles fixed on screed (m.s) complete with an approved tile adhesive	3	SM		
B	Ditto to approx. 300mm wide treads and fixed with and including carborandum strip.	22	LM		
C	Ditto to approx. 150mm high risers	24	LM		
D	Ditto to approx. 100mm high skirting	28	LM		
	<i>Carried to Collection</i>				
	<u>COLLECTION</u> Brought forward from Page AAE/CH/10 Brought forward from Page AAE/CH/11 Brought forward from Page AAE/CH/12 Brought forward from Page AAE/CH/13 Brought down from Above				
	FINISHES CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>ELEMENT NO. 7</u> <u>JOINERY FITTINGS AND FIXTURES</u> <u>Reception Desk</u>				
A	Supply assemble and fix timber framed reception desk; overall size 3700 x 900 x 1200 mm high complete with 20 mm thick polished granite top; 300 mm wide at 700mm height, 600 mm wide at 1200 mm height and 1200 mm high granite cladding on desk front and 500 mm high on the opposite side all cut to required size and shape and smooth edges; all complete with MDF underdesk movable drawers and all necessary fixing accessories, all to approval		ITEM		
	JOINERY FITTINGS AND FIXTURES CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

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PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	CHANCERY SECTION SUMMARY		PAGE NO		
1	DEMOLITIONS & ALTERATIONS	AAE/CH/3			
2	ROOFING	AAE/CH/4			
3	WALLING	AAE/CH/5			
4	DOORS	AAE/CH/8			
5	WINDOWS	AAE/CH/9			
6	FINISHES	AAE/CH/14			
7	JOINERY FITTINGS AND FIXTURES	AAE/CH/15			
8	EXTERNAL WORKS	AAE/CH/16			
	TOTAL FOR REFURBISHMENT WORKS TO CHANCERY CARRIED TO GRAND SUMMARY				

**BILL NO. 3-OUTDOOR
KITCHEN**

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>PROPOSED OUTDOOR KITCHEN</u> <u>ELEMENT NO. 1</u> <u>DEMOLITIONS & ALTERATIONS</u> <u>All the works herein below are measured provisionally and hence subject to actual measurements upon execution.</u> <u>Carefully demolish/remove, cart away/store, and make good disturbed surfaces as directed:</u> <u>All demolitions to include making good disturbed surfaces</u> <u>Retaining wall</u> A Carefully demolish existing 500 mm thick masonry retaining wall with deep cracks, cart away debris and make good surface to receive new water proofing membrane (Approx. 8 SM) B Planking, strutting and shoring to existing retained soil to keep free from fallen materials				
	DEMOLITION AND ALTERATIONS CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>ELEMENT NO.2</u>				
	<u>SUBSTRUCTURES (ALL PROVISIONAL)</u>				
	<u>Excavation</u>				
A	Excavate oversite to remove top vegetable soil average 200 mm deep; wheel and cart away from site	45	SM		
	<u>Reducing level</u>				
B	Excavate to reduce level starting from stripped level avarangely 300mm deep and load and remove the excavated material from site as deposit as directed by the project manager (m/s).	20	CM		
C	Excavate foundation trenches starting from reduced level not exceeding 1.50 meters deep.	36	CM		
D	Excavate for column bases commensing from reduced level but not exceeding 1.5m deep	30	CM		
E	Extra over excavations for excavation of different classes of rock	9	CM		
F	Return, fill-in and rum selected excavated materials around foundations	50	CM		
G	Remove and cart away surplus excavated materials.	25	CM		
	<u>Disposal of water</u>				
H	Keep excavations free from all water by bailing, pumping or otherwise		ITEM		
	<u>Planking and strutting</u>				
J	Planking, strutting and shoring to sides of all excavations : keep excavations free from all fallen materials		ITEM		
	<u>Filling</u>				
K	Approved hardcore filling; well watered and compacted in layers not exceeding 150mm thick all to Engineer's directions and approval	18	CM		
L	50 mm Thick approved quarry dust blinding on surfaces of hardcore to receive concrete (m.s)	41	SM		
	<u>Anti-termite Treatment</u>				
M	Premise 200 SC' or other equal and approved anti-termite insecticide treatment with ten years guarantee, applied strictly in accordance with manufacturer's instructions, to tops of fill and foundation walls	41	SM		
	<u>Damp Proof Membrane</u>				
N	1000 gauge polythene sheeting laid on blinded hardcore with 300 mm side and end laps to receive concrete (m.s)	41	SM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Concrete</u>				
A	50mm thick mass concrete class (1:4:8) to bottoms of strip footing	24	SM		
B	50mm thick mass concrete class (1:4:8) to bottoms of Column bases	20	SM		
	<u>Insitu concrete; reinforced; class 25/ (20mm)(1:1.5:3); vibrated</u>				
C	Foundations in trenches	7	CM		
D	Foundations in columns bases	7	CM		
E	Foundations columns	1	CM		
F	300 mm Thick retaining wall	26	SM		
G	150mm thick bed	41	SM		
	<u>Reinforcement</u>				
	<u>Supply and fix steel bar reinforcement including bending, hooking, tying wire, cutting, spacers and supporting all in position</u>				
	<u>High tension square twisted mild steel bars reinforcement to BS 4449</u>				
H	Assorted ribbed bars	3,420	KG		
J	Ditto 10 mm bars		KG		
K	Ditto 12 mm bars		KG		
	<u>Fabric; B.S. 4483</u>				
L	Reference A142 mesh 200 x 200 mm , weight 2.22 kgs per square meter (measured net - no allowance made for laps(including bends, tying wire and distance blocks	41	SM		
	<u>Sawn formwork to:-</u>				
M	To sides; vertical or battering of foundations, ground beams or the like	24	SM		
N	To sides; vertical or battering of column bases	19	SM		
P	To sides; vertical or battering of columns	18	SM		
Q	To sides; vertical or battering of retaining wall	51	SM		
R	Edges of ground floor slab; 75 to 150mm wide	30	LM		
	<u>Substructure Walling</u>				
	<u>Selected and approved natural stone masonry walling : bedded jointed and pointed in cement and sand (1:3) mortar : reinforced with 25 x 3mm hoop iron strip laid horizontally every alternate course to approval</u>				
S	200 mm Thick wall	32	SM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Plinth</u>				
	<u>Cement and sand (1:4) rendering</u>				
A	Rendering to concrete and masonry surfaces finished with a steel float, thickness 25mm	18	SM		
	<u>Prepare and apply three coats bituminous paint</u>				
B	Rendered surfaces externally	18	SM		
	<i>Carried to Collection</i>				
	<u>COLLECTION</u>				
	Total brought forward from page AAE/K/2				
	Total brought forward from page AAE/K/3				
	Total brought down from Above				
	TOTAL FOR SUBSTRUCTURES CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

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PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	ELEMENT NO.4 WALLING <u>External walling</u> <u>Approved chiseled natural stone masonry walling : bedded jointed and pointed in cement and sand (1:3) mortar: reinforced with 25 x 3mm hoop iron strip laid horizontally every alternate course to approval</u>				
A	200 mm Thick walling	39	SM		
B	Extra over walling for horizontal and vertical pointing in 10mm thick rod in cement and sand (1:3) mortar; one coat of bituminous paint. <u>Damp proof course</u> <u>Approved horizontal damp proof course to B.S 743 laid under walling (measured net - no allowance for laps)</u>	39	SM		
C	300 mm Thick walling <u>Internal walling</u> <u>Approved machine cut stone masonry walling : bedded jointed and pointed in cement and sand (1:3) mortar: reinforced with 25 x 3mm hoop iron strip laid horizontally every alternate course to approval</u>	11	LM		
D	200 mm Thick walling <u>Damp proof course</u> <u>Approved horizontal damp proof course to B.S 743 laid under walling (measured net - no allowance for laps)</u>	20	SM		
E	200mm thick walling	3	LM		
	TOTAL FOR WALLING CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>ELEMENT NO. 5</u>				
	<u>ROOFING (ALL PROVISIONAL)</u>				
	<u>Roof Covering</u>				
	<u>Galvanized steel box profile sheets; 28 gauge; prepainted roof covering; 150mm laps on one end and one and a half corrugation side lap; fixing to steel purlins (m/s) with and including approved fixing bolts and neoprene washers</u>				
A	Roof covering	57	SM		
B	Ridge tiles to match	11	LM		
	<u>CARPENTRY</u>				
	<u>The following in pressure impregnated first grade cypress timber trusses, complete with bolted connections, spanning from 3000 to 6000mm wide, hoisting 4.0m above ground</u>				
	<u>Truss Type 1</u>				
C	150 x 50mm Rafters	35	LM		
D	150 x 50 mm Tie beams	33	LM		
E	100 x 50mm struts and ties	26	LM		
	<u>The following in pressure impregnated first grade cypress timber</u>				
F	100 x 50mm Common rafters	60	LM		
G	150 x 25mm Ridge board	11	LM		
H	75 x 50 mm wall plate bolted to wall with and including 10mm diameter bolts 60mm long at 1200mm centres	27	LM		
	<u>RAINWATER DISPOSAL</u>				
	<u>Damp proofing</u>				
	<u>Sirrah P GR 5 kg/sm - APP bituminous membrane or other equally approved waterproofing membrane including 3 coats reflective paint ; provide 10 year guarantee</u>				
J	Lining onto concrete gutters	57	SM		
K	Ditto angle fillets	54	LM		
L	Dressing waterproofing around 100mm diameter "fulbora rain water outlet"	4	NO		
M	20mm thick cement sand (1:4) protection screed to waterproofing membrane	57	SM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Light weight cement and sand (1:5) roof screed; on concrete slab</u>				
A	50 mm thick light weight vermiculate screed or any other equal and approved	240	SM		
B	Lining to base and sides of gutter to falls	360	SM		
C	Labour forming 50 x 50 triangular fillet against wall and beam	54	LM		
	<u>Unplasticized PVC rainwater pipes and fittings solvent welded joints:-</u>				
D	100mm diameter down uPVC class C pipe secured to wall with and including steel brackets OR cast in RC works	14	LM		
E	100mm diameter fulbora outlet built into RC slab including formwork & labour in forming hole in 150-300mm thick RC slabs	4	NO		
F	Extra; horse shoe bend	4	NO		
	<u>Painting and Decorations</u>				
	<u>Metal work</u>				
	<u>Prepare and apply one zinc plumbate primer and three coats approved super gloss oil paint to:-</u>				
G	General surfaces of gutters; over 300mm girth external	160	SM		
H	Rainwater downpipes	10	SM		
	<i>Carried to Collection</i>				
	<u>COLLECTION</u>				
	Total brought forward from page AAE/K/7				
	Total brought down from page Above				
	TOTAL FOR ROOFING CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>ELEMENT NO. 6</u>				
	<u>WINDOWS</u>				
A	275 mm wide x 75 mm thick precast concrete window cill (1:2:4) with three labours sunk, weathered and throated cill bedded, jointed and pointed in gauged cement and sand (1:3) mortar and finished smooth on all expopsed surfaces	6	LM		
	<u>Window Board</u>				
	<u>Mahogany: selected and kept clean</u>				
B	275 x 25 mm Window board; plugged	6	LM		
C	35 x 35 mm decorated beading	6	LM		
	<u>Powder coated aluminium sections (50 x 50 x 3 mm) framed windows and accessories by approved specialist subcontractor: to Architect's approval : glazing beads bedded in mastic : to concrete or blockwork surfaces with plugs and screws: with permanent aluminium louvre vents at top edge and jointed all round in mastic</u>				
D	Window overall size 1800mm x 1500mm high overall	1	NO		
E	Window overall size 1200mm x 1500mm high overall	2	NO		
	<u>5mm Thick sheet glass and glazing with tropicalised metal putty in panes:</u>				
F	Clear sheet glass in panes over 0.5 but not exceeding 1.0 square metres	5	SM		
	<u>METAL WORK</u>				
	<u>PURPOSE - MADE UNITS</u>				
	<u>Galvanised mild steel grille framed burglar proofing in 40 x 25 x 3 mm RHS horizontal mid-member and infilled with 20 mm dia. CHS intermediate vertical members at 150 mm centres. Allow for main frame and fixing to openings, cutting and pinning to concrete or blockwork and bedding frame in cement and sand mortar (1:4) Ref. to architect's detail.</u>				
G	Window Grilles	7	SM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Painting and Decorations</u>				
	<u>On wood</u>				
	<u>Aluminium primer or other equal and approved wood primer before fixing:</u>				
	<u>=</u>				
A	Backs of window board, etc over 200mm but not exceeding 300mm girth	6	LM		
B	Ditto; quadrant beads; n.e 100mm girth	6	LM		
	<u>Knot, prime, stop, prepare and apply three coats polyurethane clear varnish on woodwork internally</u>				
C	200-300mm girth; window boards	6	LM		
D	0 - 100mm girth ; quadrant	6	LM		
	<u>On Metal work</u>				
	<u>Prepare and apply three coats oil paint full gloss to Crown Solo or other equal and approved to: -</u>				
E	General window surfaces; both sides	14	SM		
	<i>Carried to Collection</i>				
	<u>COLLECTION</u>				
	Total brought forward from page AAE/K/9				
	Total brought down from Above				
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>ELEMENT NO. 7</u> <u>DOORS</u> <u>Mild steel Doors</u> <u>Supply assemble and fix the following purpose made mild steel flush doors in 50x50x3mm steel angle framing all round, 75x50x3mm RHS main frame, infilled with 50x2mm steel flats; complete with deadlock and handles Allow for applying red oxide primer to surfaces; Provide for main frame & all necessary ironmongery to Architect's details</u>				
A	Single leaf door overall size 900 x 2400 mm high <u>Glazing</u>	2	NO		
B	5 mm Thick clear sheet glass panes over 0.1 but not exceeding 0.5 square meters; fixing with putty <u>Painting and Decorations</u> <u>On Metal work</u> <u>Prepare and apply three coats premium quality oil paint full gloss from a reputable and approved manufacturer to: -</u>	4	SM		
C	General door surfaces; both sides	9	SM		
	TOTAL FOR DOORS CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>ELEMENT NO. 8</u>				
	<u>FINISHES</u>				
	<u>Floor finishes</u>				
	<u>Cement and sand (1:3) screed as described in:-</u>				
A	32mm thick backing to receive granito floor tiles (m/s)	41	SM		
B	Ditto,but skirtings	35	LM		
	<u>Granito floor tiles</u>				
	<u>Supply and lay approved non slip Granito floor tiles with approved tile adhesive/mortar: on backing screeds (m.s.): jointed and pointed in approved coloured and anti-fungal proprietary grout: to:-</u>				
C	Floors in approved pattern to Architect's details	41	SM		
D	12 x 100 mm High skirting; straight junction with wall and floor finish.	35	LM		
	<u>Wall finishes</u>				
	<u>External Wall Finishes</u>				
	<u>12mm (Min) Gauged lime plaster (1:2:9) : steel trowelled finish : on concrete or blockwork : to</u>				
E	Sides of walls, columns, beams and gutters	71	SM		
	<u>Textured Paint</u>				
F	Prepare and apply One coat of rough cast textured paint and Two coats of weather guard paint to rendered surfaces; externally	71	SM		
	<u>Internal Wall Finishes</u>				
	<u>Plaster & Backings to masonry blockwork or concrete surfaces</u>				
	<u>12mm Cement and sand (1:3) render with wood float finish: on concrete or blockwork:</u>				
G	To receive wall tiles (m.s.)	44	SM		
	<u>12mm Gauged lime plaster (1:2:9) : steel trowelled finish : on concrete or blockwork : to</u>				
H	Masonry and concrete surfaces	119	SM		
	<u>Porcelain wall tiles</u>				
	<u>Approved coloured porcelain wall tiles: glazed; to regular pattern, from a reputable and approved manufacturer; bedding, jointing and pointing in cement mortar (1:4); grouting joints with matching colour cement and complete with approved plastic edging:</u>				
J	8 mm Thick tiles	44	SM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Ceiling finishes</u>				
	<u>Gypsum board ceiling</u>				
A	12mm thick gypsum boards suspended as trays over table and cut to profiles and suspended on and including stainless steel grid work and all necessary fixing accessories	41	SM		
B	150 x 25mm gypsum/stryopor decorative cornice with three labours plugged size	123	LM		
	<u>Painting and decorations</u>				
	<u>Prepare and apply two undercoats and one finishing coat of premium quality emulsion paint from a reputable and approved manufacturer on:</u>				
C	Soffites of gypsum board ceiling	41	SM		
D	Gypsum decorative surfaces over 100 mm but not exceeding 200 mm girth	36	LM		
	<i>Carried to Collection</i>				
	<u>COLLECTION</u>				
	Total brought forward from page AAE/K/13				
	Total brought forward from page AAE/K/14				
	TOTAL FOR FINISHES CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	ELEMENT NO. 9 JOINERY FITTINGS AND FIXTURES <u>Concrete work</u> <u>Plain concrete class 20/15 as described in:-</u> A 100mm Thick Plinths 34 SM <u>Sawn formwork to:-</u> B Approved sawn formwork to edges of concrete plinths 75 to 150mm wide 5 LM <u>Fabric; B.S. 4483</u> C Reference A142 mesh 200 x 200 mm , weight 2.22 kgs per square meter (measured net - no allowance made for laps(inclunding bends, tying wire and distance blocks 48 SM <u>Kitchen Cabinets</u> D Supply assemble and fix low level kitchen cabinets overall size 6000 x 600 x 900mm high comprising approved timber framework, 18mm thick MDF panels sides, partitions, shelves and doors and drawers; complete with 20 mm thick granite worktop finish and all neccessary ironmongery all to Architect's detail 1 NO. E Supply assemble and fix high level kitchen cabinets overall size 3600 x 300 x 750mm high comprising 18mm thick MDF top and bottom, shelving, partitions, drawers and doors; including necessary framework and complete with all neccessary ironmongery to Architect's detail 4 NO.				
	TOTAL FOR JOINERY FITTINGS AND FIXTURES CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	OUT DOOR KITCHEN SUMMARY ELEMENT				
1	DEMOLITIONS AND ALTERATIONS	AAE/K/1			
2	SUBSTRUCTURES	AAE/K/4			
3	REINFORCED CONCRETE FRAME	AAE/K/5			
4	WALLING	AAE/K/6			
5	ROOFING	AAE/K/8			
6	WINDOWS	AAE/K/9			
7	DOORS	AAE/K/10			
8	FINISHES	AAE/K/13			
9	JOINERY FITTINGS	AAE/K/14			
	TOTAL AMOUNT FOR OUT DOOR KITCHEN CARRIED TO SUMMARY.				

**BILL NO. 4-
AMBASSADOR'S
RESIDENCE**

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>REFURBISHMENT WORKS TO AMBASSADOR'S RESIDENCE</u> <i><u>All the works herein below are measured provisionally and hence subject to actual measurements upon execution.</u></i> <u>ELEMENT NO. 1</u> <u>DEMOLITIONS & ALTERATIONS</u> <i><u>Carefully demolish/remove, cart away/store, and make good disturbed surfaces as directed:</u></i> <i><u>All demolitions to include making good disturbed surfaces</u></i> <u>Main House</u> <u>Roofing</u> A Remove leaking water proofing membrane to roofing slab at the entrance porch; cart away debris and make good surface to receive new water proofing membrane (Approx. 8 SM) B Hack off existing roof cement/sand screed and cart away (Approx. 8 SM) C Carefully hack existing concrete gutter to enlarge existing fulbora from 100 mm diameter to 200 mm diameter; cart away debris arising therefrom and make good disturbed surfaces; apply approved waterproofing and replace cement/sand screeds to approval for 2 No. points D Carefully remove existing leaking decra roofing sheets cart away debris and make good surface to receive new water proofing membrane (Approx. 147 SM) <u>Floor finishes</u> E Hack out existing marble floor finishes jointed in and including cement sand screed backing and cart away debris (Approx. area 45 SM) F Hack out floor finishes jointed in and including cement sand screed backing to create 50 mm deep groove, cart away debris and make good disturbed surfaces for new masonry walling (Approx. length 3 LM)				
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Wall finishes</u>				
A	Hack wall tiles jointed in and including cement sand screed backing and cart away debris (Approx. area 27 SM)		ITEM		
B	Carefully hack existing wall at the window head to create a groove; cart away all debris arising therefrom and make good all disturbed surfaces for throating (Approx. 4 LM)		ITEM		
	<u>Kitchen cabinets</u>				
C	Carefully remove existing laminated board low level kitchen cabinets overall size 13600 mm long x 600 mm deep x 900 mm high complete with 1 no. single bowl kitchen sink, cart away debris and make good disturbed surfaces for new cabinets		ITEM		
D	Carefully remove existing laminated board kitchen island cabinets overall size 2400 mm long x 1200 mm wide x 900 mm high complete, cart away debris and make good disturbed surfaces for new cabinets		ITEM		
E	Carefully remove 4 no. existing high level kitchen cabinets overall size 2000 mm long x 300 mm wide x 750 mm high complete, cart away debris and make good disturbed surfaces for new cabinets		ITEM		
	<u>Garage</u>				
F	Carefully remove existing leaking decra roofing sheets cart away debris and make good surface to receive new roof covering (Approx. 169 SM)		ITEM		
G	Carefully remove worn out rainwater gutters, downpipes and fascia boards cart away debris and make good surface to receive new rainwater goods (Approx. 24 LM)		ITEM		
H	Carefully remove existing damaged ceiling finish cart away debris and make good surface to receive new ceiling (Approx. 115 SM)		ITEM		
	<i>Carried to Collection</i>				
	<u>COLLECTION</u>				
	Brought forward from Page AAE/AR/1				
	Brought down from Above				
	DEMOLITION AND ALTERATIONS CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>ELEMENT NO. 2</u>				
	<u>BUILDERS WORKS IN THE MAIN HOUSE</u>				
	<u>ROOFING</u>				
	<u>Roof covering</u>				
A	Supply and install Decra roofing tiles in approved profile on existing battens on roof structure with and including all necessary bolts, self-tapping screws and neoprene washers.	147	SM		
	<u>Waterproofing to roof slab</u>				
B	Make 50mm wide x 25mm deep groove in reinforced concrete, turn in roofing felt and make good thereafter	120	LM		
C	32mm thick cement/sand screed to receive roofing felt	8	SM		
D	Apply priming coat on screeded surface by torch spray	8	SM		
E	Sirrah P GR 5kg/sm APP bituminous membrane roofing felt applied on primed screed	8	SM		
F	Ditto in dressing along the intersection of the porch roof slab and external wall; 150mm overlap to address leakages to approval	3	LM		
G	Dress APP membrane around fulbora outlets size 200mm diameter	10	NO		
H	19mm thick precast concrete interlocking tiles laid on and including 30mm thick cement and sand screed paving	8	SM		
J	100mm high pre-cast concrete skirting	3	LM		
K	200 mm Diameter uPVC rainwater downpipe fixed with and including mild steel straps at 900mm centres, plugged and screwed to wall or cast in reinforced concrete works	6	LM		
	<u>Testing</u>				
L	Allow for unblocking and testing the whole of the rainwater disposal installation to the satisfaction of the Architect and for replacing any defective work, large pipe not exceeding 200mm diameter fixed with suspended metal holder bats (approx.20 LM)		ITEM		
M	Allow for minor repair works to the existing roof structure and and roof covering in the areas that may be affected in the course of replacing the damaged roof covering (approx. 150 SM)		ITEM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>WALLING</u>				
	<u>Masonry Walling repairs</u>				
A	Allow for crack repair works for existing masonry wall by cutting a groove, cleaning the cracks; prepare and apply approved crack filler in two coats complete with approved fiber glass on the second coat; allow for sanding the wall surface and three coats paint		ITEM		
	<u>DOORS</u>				
	<u>Timber Flush doors Re-Decoration</u>				
B	Scrub defective existing decoration to prepare surface to receive new finish; cart away arising and make good and prepare and apply two coats premium quality varnish to existing surfaces of timber	60	SM		
	<u>Door frames and finishings</u>				
	<u>Wrought cedar/mahogany timber in :-</u>				
C	200 x 50 mm thick frame with two labours; plugged	12	LM		
D	45 x 38mm architrave with one labour	12	LM		
E	25 x 25mm quadrant beading	12	LM		
	<u>50mm thick wrot mahogany panelled doors comprising of 150 x 50mm thick stiles and top rail; 150 x 50mm thick middle and bottom rail, complete with 5mm thick clear sheet glass to funlight and glazing beads all to approval</u>				
F	Double leaf door size 900 x 2100 mm high	2	NO.		
	<u>Ironmongery</u>				
	<u>Supply and fix the following ironmongery as per Union or other equal and approved manufacturer(s) catalogue including matching fixing screws:</u>				
G	100mm brass butt hinges	3	PRS		
H	3-lever mortice lock complete with set lever handle furniture Ref. Union 2295	2	NO		
J	38mm diameter rubber door stop rawl bolted onto floor or wall	2	NO		
K	800 x 200mm wide kicking plate Ref. KP-800-200-SS	2	NO		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Painting and decorating</u> <u>Prepare and apply two coats aluminium wood primer on back of timber from a reputable and approved manufacturer before fixing to:-</u>				
A	Surfaces not exceeding 100mm girth	24	LM		
B	Surfaces over 200mm but not exceeding 300mm girth	12	LM		
	<u>Knot, prime and stop, prepare and apply two undercoats and one finishing coat of varnish from a reputable and approved manufacturer on;</u>				
C	General surfaces of doors	8	SM		
D	Surfaces over 200mm but not exceeding 300mm girth	12	LM		
E	Ditto not exceeding 100mm girth	21	LM		
	<u>WINDOWS</u> <u>Powder coated aluminium sections (50 x 50 x 3 mm) framed windows and accessories by approved specialist subcontractor: to Architect's approval : glazing beads bedded in mastic : to concrete or blockwork surfaces with plugs and screws: with permanent aluminium louvre vents at top edge and jointed all round in mastic</u>				
F	Window overall size 1500mm x 1800mm high overall	1	NO		
	<u>Glazing</u> <u>5mm thick sheet glass and glazing with tropicalised metal putty in panes:</u>				
G	Clear sheet glass in panes over 0.5 but not exceeding 1.0 square metres	3	SM		
H	Allow a provisional sum of USD Ten Thousand Seven Hundred (Usd. 10,700.00) only for supply and installation of quality fabric curtains complete with sheers.		ITEM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>FINISHES</u>				
	<u>Internal Wall finishes</u>				
	<u>Backing screed; cement and sand (1:4) wood floated:</u>				
A	15mm thick screed backing to receive ceramic wall tiles (m/s)	30	SM		
	<u>Approved coloured porcelain wall tiles; glazed; to regular pattern, from a reputable and approved manufacturer; bedding, jointing and pointing in cement mortar (1:4); grouting joints with matching colour cement and complete with approved plastic edging:</u>				
B	8 mm Thick tiles	30	SM		
C	Extra over for approved border tile; 100mm wide	9	LM		
	<u>Painting and Decoration</u>				
D	Scrub defective existing decoration to prepare surface to receive new paint; cart away arising and make good and prepare and apply two coats premium quality gloss paint to existing plastered wall surfaces	14	SM		
	<u>Porcelain floor finishes</u>				
	<u>Supply and lay approved porcelain floor tiles, commercial grade, meeting industry standards for 0.5% water absorption coefficient and PEI 4 abrasion resistance prepared screed substrate, level, plumb, and free from defects complete with approved tile adhesive suitable for porcelain tiles on approved screed; in approved pattern and grouting, tooled smooth, and cleaned to manufacturer's recommendations.</u>				
E	10 mm Thick floor tiles	45	SM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>JOINERY FITTINGS</u>				
	<u>Wardrobes</u>				
A	Prepare existing timber wardrobe surfaces to receive new finish works by cleaning and sanding surfaces and knot, prime and stop; prepare and apply three coats of quality clear varnish		ITEM		
	<u>Kitchen Cabinets</u>				
B	Supply assemble and fix low level kitchen cabinets overall size 11600 x 600 x 900mm high comprising approved timber framework, 18mm thick MDF panels sides, partitions, shelves and doors and drawers; complete with 20 mm thick granite worktop finish and all neccessary ironmongery all to Architect's detail	1	NO.		
C	Ditto; cabinets overall size 2000 x 600 x 900 mm high	1	NO.		
D	Ditto; cabinets overall size 2400 x 1200 x 900 mm high	1	NO.		
E	Supply assemble and fix high level kitchen cabinets overall size 2000 x 300 x 750mm high comprising 18mm thick MDF top and bottom, shelving, partitions, drawers and doors; including necessary framework and complete with all neccessary ironmongery to Architect's detail	4	NO.		
	<i>Carried to Collection</i>				
	<u>COLLECTION</u>				
	Brought forward from Page AAE/AR/3				
	Brought forward from Page AAE/AR/4				
	Brought forward from Page AAE/AR/5				
	Brought down from above				
	NEW WORKS IN THE MAIN HOUSE CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>ELEMENT NO. 3</u>				
	<u>BUILDERS WORKS IN THE GARAGE</u>				
	<u>ROOFING</u>				
	<u>Roof Covering</u>				
A	Supply and install Decra roofing tiles in approved profile on existing battens on roof structure with and including all necessary bolts, self-tapping screws and neoprene washers.	169	SM		
	<u>Carpentry</u>				
	<u>The following in pressure impregnated first grade approved softwood timber</u>				
	<u>Fascia Board & Barge board</u>				
B	200 x 25 mm thick wrot cypress fascia boards fixed to end of rafters (m/s)	24	LM		
	<u>Rainwater Disposal</u>				
	<u>18g Galvanised mild steel sheeting; all welds ground smooth</u>				
C	200 x 150mm box gutter including soldered joints in the running length fixed to fascia board with and including brackets at approved centers	24	LM		
D	Extra; 100mm dia.outlet 100mm long	6	No		
	<u>UPVC</u>				
E	200 mm Diameter uPVC rainwater downpipe fixed with and including mild steel straps at 900mm centres, plugged and screwed to wall or cast in reinforced concrete works	18	LM		
F	Extra; swanneck bend with 1135mm projection	4	No		
G	Extra; horse shoe bend	4	No		
	<u>Painting and Decorations</u>				
	<u>On metal</u>				
	<u>Prepare and apply one zinc plumbate primer and three coats of 'CROWN SOLO' or other equal and approved super gloss oil paint to:-</u>				
H	Gutters; 600mm girth; external	14	LM		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>FINISHES</u>				
	<u>Internal Wall finishes</u>				
	<u>Painting and Decoration</u>				
A	Scrub off defective existing decoration to prepare surface to receive new paint; cart away arising and make good and prepare and apply two coats premium quality matt emulsion paint to existing plastered wall surfaces	224	SM		
	<u>Ceiling finishes</u>				
	<u>Chip board</u>				
B	12mm thick patterned chip-board ceiling board nailed to existing timber bandering (m/s); nails punched and puttied	88	SM		
	<u>Painting and Decoration</u>				
	<u>Prepare and apply one undercoat and two coats of first quality emulsion paint to the following surfaces</u>				
C	Chip-board ceiling	88	SM		
	<i>Carried to Collection</i>				
	<u>COLLECTION</u>				
	Brought forward from Page AAE/AMB./7				
	Brought down from above				
	NEW WORKS IN THE GARAGE CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

[illegible]

**BILL NO. 5-STAFF
RESIDENCES**

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>REFURBISHMENT WORKS TO STAFF RESIDENCES</u> <i><u>All the works herein below are measured provisionally and hence subject to actual measurements upon execution.</u></i> <u>ELEMENT NO. 1</u> <u>DEMOLITIONS & ALTERATIONS</u> <i><u>Carefully demolish/remove, cart away/store, and make good disturbed surfaces as directed:</u></i> <i><u>All demolitions to include making good disturbed surfaces</u></i> <u>Block A</u> <u>Kitchen Cabinets</u> A Carefully remove existing laminated board low level kitchen cabinets overall size 2200 mm long x 600 mm deep x 900 mm high complete with 1 no. single bowl kitchen sink, cart away debris and make good disturbed surfaces for new cabinets B Carefully remove existing high level kitchen cabinets overall size 2200 mm long x 300 mm wide x 750 mm high complete, cart away debris and make good disturbed surfaces for new cabinets <u>DPR</u> C Carefully remove existing 1No. aluminium framed doors overall size 1200 x 2400 mm high, hand over all arisings to the client and make good all disturbed surfaces				
	DEMOLITION AND ALTERATIONS CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
A	ELEMENT NO. 2 NEW WORKS IN THE STAFF RESIDENCES <u>Timber Flush doors</u> <u>Door frames and finishings</u> <u>Wrought cedar/mahogany timber in :-</u> 200 x 50 mm thick frame with two labours; plugged	6	LM		
B	200 x 50mm moulded transom	1	LM		
C	45 x 38mm architrave with one labour	6	LM		
D	25 x 25mm quadrant beading <u>50mm thick wrot mahogany panelled doors comprising of 150 x 50mm thick stiles and top rail; 150 x 50mm thick middle and bottom rail</u>	6	LM		
E	Double leaf door size 1200 x 2100 mm high <u>Ironmongery</u> <u>Supply and fix the following ironmongery as per Union or other equal and approved manufacturer(s) catalogue including matching fixing screws:</u>	1	NO.		
F	100mm brass butt hinges	3	PRS		
G	3-lever mortice lock complete with set lever handle furniture Ref. Union 2295	1	NO		
H	38mm diameter rubber door stop rawl bolted onto floor or wall	1	NO		
J	800 x 200mm wide kicking plate Ref. KP-800-200-SS	1	NO		
	Carried to Collection				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>Painting and decorating</u>				
	<u>Prepare and apply two coats aluminium wood primer on back of timber from a reputable and approved manufacturer before fixing to:-</u>				
A	Surfaces not exceeding 100mm girth	12	LM		
B	Surfaces over 200mm but not exceeding 300mm girth	6	LM		
	<u>Knot, prime and stop, prepare and apply two undercoats and one finishing coat of varnish from a reputable and approved manufacturer on;</u>				
C	General surfaces of doors	6	SM		
D	Surfaces over 200mm but not exceeding 300mm girth	7	LM		
E	Ditto not exceeding 100mm girth	8	LM		
	<u>Kitchen Cabinets</u>				
F	Supply assemble and fix low level kitchen cabinets overall size 3000 x 600 x 900mm high comprising approved timber framework, 18mm thick MDF panels sides, partitions, shelves and doors and drawers; complete with 20 mm thick granite worktop finish and all neccessary ironmongery all to Architect's detail	2	NO.		
G	Supply assemble and fix high level kitchen cabinets overall size 2000 x 300 x 750mm high comprising 18mm thick MDF top and bottom, shelving, partitions, drawers and doors; including necessary framework and complete with all necessary ironmongery to Architect's detail	2	NO.		
	<u>Shower cubicles</u>				
H	Supply, assemble and fix 8mm thick toughened frameless glass shower cubicles overall size 1200 x 1200 x 2100 mm high, complete with shower tray, sliding door, shower accessories and all necessary fixing accessories and ironmongery. Allow for sand blast effect film by Lumar or equivalent as directed	4	NO.		
	<i>Carried to Collection</i>				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	QTY	UNIT	RATE (USD.)	AMOUNT (USD.)
	<u>COLLECTION</u> Brought forward from Page AAE/SR./2 Brought forward from Page AAE/SR./3				
	NEW WORKS IN STAFF RESIDENCE CARRIED TO SUMMARY				

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

[illegible]

**BILL NO. 6-CIVIL
WORKS**

CIVIL WORKS					
ITEM	DESCRIPTION	UNIT	QTY	RATE (USD.)	AMOUNT (USD.)
	<u>BILL NO 01: DRIVE WAYS, PARKING & STORMWATER DRAINAGE</u>				
	<u>EXCAVATIONS</u>				
1.01	Scarify the existing bituminous pavement to spoil, average depth 50mm	CM	30		
1.02	Excavate, trim and clean pot holes, failed and damaged areas of the carriageway and edges including carting away to spoil the excavated materials	CM	21		
1.03	Load and cart away any excavated materials.	CM	21		
	<u>CONSTRUCTION</u>				
1.04	Provide, lay and compact 200mm thick handpacked stones as road base including filling voids with stone dust as directed by the Engineer	CM	24		
1.05	Clean and prepare surface of the road, provide, heat and spray MC 70 cut-back bitumen as prime coat to carriageway and foot paths at rate 0.8-1.2 lts/m ²	Litres	720		
1.06	Provide, heat and spray K-160 as tack coat at a rate of 0.8-1.0 ltrs/m ² as directed by the Engineer	Litres	600		
1.07	Provide, lay and compact 50mm AC Type 1 as overlay layer for the whole section as a wearing coarse	CM	30		
1.08	Allow a prime cost of sum for material testing as directed by the Engineer	SUM	1		
	<u>ROAD KERBS ONLY</u>				
1.09	Excavate for kerb stone depth not exceeding 250mm, backfill and cart away the excavated material.	CM	30		
1.10	Prepare and pour 225x100mm and 350x100mm concrete class 15, mix 1:3:6 to excavated place as bedding and haunching respectively for the kerb stone.	CM	14		
1.11	Provide all material and fix sawn timber form work to edges of haunching to the kerb stones, 75mm- 150mm girth	LM	60		
1.12	Provide, lay and joint along the edge of the road 125x250mm pre-cast concrete kerb all to detail (50) 5332A.	LM	60		
	Total Carried Forward to the Next Page				

CIVIL WORKS					
ITEM	DESCRIPTION	UNIT	QTY	RATE (USD.)	AMOUNT (USD.)
	Brought forward from previous page				
	<u>ROAD CHANNEL ONLY</u>				
1.13	Excavate depth not exceeding 200mm, backfill and cart away the excavated material.	CM	28		
1.14	Prepare and pour 475x200mm concrete class 15, mix 1:3:6 to excavated place as edging and haunching respectively for road channel .	CM	3		
	<u>ROAD MARKING</u>				
1.15	Prepare and apply three coats of road marking refractory thermoplastic paint on driveways and road kerbs, surfaces not exceeding 100mm girth.	SM	140		
	<u>ROAD SIGNAGE</u>				
1.16	Provide and erect permanent road signs where instructed by the Engineer	No.	2		
1.17	Allow a sum for demolition, removal and reinstatement of existing services.	SUM	1		
	<u>STORM WATER DRAINAGE</u>				
1.18	Carefully remove broken and worn out paving slabs and cart away from site (Appro. 200 SM)	ITEM			
1.19	Ditto IBD channels (Appro. 50 LM)	ITEM			
1.20	Ditto shallow drain channels (Appro. 50 LM)	ITEM			
	<u>Open storm drain</u>				
1.21	Provide, lay and compact 100mm thick murrum bed and on sloping sides of the IBD to detail	LM	50		
1.22	Provide, lay and joint 450x225mm external dimensions Pcc IBD to detail	LM	50		
1.23	Provide and lay one side slab on each side to detail	LM	100		
	<u>Shallow Drain</u>				
1.24	Provide, lay and joint 800x500x175mm precast concrete Storm Water Channel including 50mm thick concrete bed mix 1:3:6 and any necessary formwork to detail	LM	50		
	Total Carried Forward to the Next Page				

CIVIL WORKS					
ITEM	DESCRIPTION	UNIT	QTY	RATE (USD.)	AMOUNT (USD.)
	Brought forward from previous page				
1.25	<u>STORM WATER TESTING</u> Allow for cleaning, removal of all the debris and testing the whole of the storm water drainage system in the presence of the Engineer/Project Manager and make good any defects, re-test as necessary and leave the whole system perfect and to the satisfaction.	ITEM	1		
	TOTAL CARRIED TO SUMMARY PAGE				

**BILL NO. 7-
ELECTRICAL
INSTALLATION
WORKS**

ELECTRICAL INSTALLATION WORKS

**GENERAL SPECIFICATONS
OF
MATERIALS AND WORKS**

GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

- 2.1 General
- 2.2 Standard of Materials
- 2.3 Workmanship
- 2.4 Procurement of Materials
- 2.5 Shop Drawings
- 2.6 Record Drawings
- 2.7 Regulations and Standards
- 2.8 Setting out Works
- 2.9 Testing on Site
- 2.10 Extent of Contract Works
- 2.11 Conformity with the Specification
- 2.12 Information Required with Tenders
- 2.13 Site Conditions
- 2.14 Tropicalisation of Components
- 2.15 Surface Finish
- 2.16 Record of Drawings
- 2.17 Maintenance Manual
- 2.18 Factory Tests
- 2.19 Installation
- 2.20 Spare Parts
- 2.21 Tools
- 2.22 Maintenance Period
- 2.23 Maintenance Contract
- 2.24 Transport and Storage

2.1 GENERAL

This specification is to be read in conjunction with the drawings which are issued with it. Bills of quantities shall be the basis of all additions and omissions during the progress of the works.

2.2 STANDARD OF MATERIALS

Where the material and equipment are specifically described and named in the Specification followed by approved equal, they are so named or described for the purpose of establishing a standard to which the sub-contractor shall adhere.

Should the Sub-contractor install any material not specified herein before receiving approval from the proper authorities, the Engineer shall direct the Sub-contractor to remove the material in question immediately. The fact that this material has been installed shall have no bearing or influence on the decision by the Engineer.

All materials condemned by the Engineer as not approved for use, are to be removed from the premises and suitable materials delivered and installed in their place at the expense of the Sub-contractor. All materials required for the works shall be new and the best of the respective kind and shall be of a uniform pattern.

2.3 WORKMANSHIP

The workmanship and method of installation shall conform to the best standard practice. All work shall be performed by a skilled tradesman and to the satisfaction of the Engineer. Helpers shall have qualified supervision.

Any work that does not in the opinion of the Engineer conform to the best standard practice will be removed and reinstated at the Sub-contractor's expense.

Permits, Certificates or Licenses must be held by all tradesmen for the type of work; in which they are involved where such permits, certificates or licenses exist under Government legislation.

2.4 PROCUREMENT OF MATERIALS

The sub-contractor is advised that no assistance can be given in the procurement or allotment of any materials or products to be used in and necessary for the construction and completion of the work.

Sub-contractors are warned that they must make their own arrangements for the supply of materials and/or products specified or required.

2.5 SHOP DRAWINGS

Before manufacture or Fabrication is commenced the sub-contractor shall submit Two copies of detailed drawings of all control pillars, meter cubicles, medium voltage switchboards including their components showing all pertinent

information including sizes, capacities, construction details, etc, as may be required to determine the suitability of the equipment for the approval of the Engineer. Approval of the detailed drawings shall not relieve the sub-contractor of the full responsibility of errors or the necessity of checking the drawings himself or of furnishing the materials and equipment and performing the work required by the plans and specifications.

2.6 RECORD DRAWINGS

These diagrams and drawings shall show the completed installation including sizes, runs and arrangements of the installation. The drawings shall be to scale not less than 1:50 and shall include plan views and section.

The drawings shall include all the details which may be useful in the operation, maintenance or subsequent modifications or extensions to the installation.

Three sets of diagrams and drawings shall be provided, all to the approval of the Engineer.

One coloured set of line diagrams relating to operating and maintenance instructions shall be framed and, mounted in a suitable location.

2.7 REGULATIONS AND STANDARDS

All work executed by the Sub-contractor shall comply with the current edition of the "Regulations" for the Electrical Equipment of Buildings, issued by the Institution of Electrical Engineers, and with the Regulations of the Local Electricity Authority.

Where the two sets of regulations appear to conflict, they shall be clarified with the Engineers. All materials used shall comply with relevant Kenya Bureau of Standards Specification.

The equipment shall comply with all relevant statutory instruments and regulations current at the date of tender and in particular the following:

1. I.E. E Wiring Regulations
2. Regulation under the Electric Power Act
3. Factories Act
4. Any special regulations issued by the local Electricity or Water Undertakings
5. Kenya Bureau of Standards (K.B.S)

The equipment and all components shall comply with all relevant KBS standards and codes of practice or other equal and approved standards specifications and codes. Where the equipment or part of it complies with other internationally recognized standards which are less stringent than British standards or Codes of

practice, then the difference is to be stated in writing and must accompany the tender submission.

2.8 SETTING OUT WORK

The sub-contractor at his own expenses; is to set out works and take all measurements and dimensions required for the erection of his materials on site; making any modifications in details as may be found necessary during the progress of the works, submitting any such modifications or alterations in detail to the Engineer before proceeding and must allow in his Tender for all such modifications and for the provision of any such sketches or drawings related thereto.

2.9 TESTING ON SITE

The Sub-contractor shall conduct during and at the completion of the installation and, if required, again at the expiration of the maintenance period, tests in accordance with the relevant section of the current edition of the Regulations for the electrical equipment of buildings issued by the I.E.E of Great Britain, the Government Electrical Specification and the Electric Supply Company's By-Laws.

- (a) Tests shall be carried out to prove that all single pole switches are installed in the 'live' conductor.
- (b) Tests shall be carried out to prove that all socket outlets and switched socket outlets are connected to the 'live' conductor in the terminal marked as such, and that each earth pin is effectively bonded to the earth continuity system. Tests shall be carried out to verify the continuity of all conductors of each 'ring' circuit.
- (c) Phase tests shall be carried out on completion of the installation to ensure that correct phase sequence is maintained throughout the installation. Triplicate copies of the results of the above tests shall be provided within 14 days of the witnessed tests and the Sub-contractor will be required to issue to the service engineer the requisite certificate upon completion as required by the regulations referred to above.
- (d) Any faults, defects or omissions or faulty workmanship, incorrectly positioned or installed parts of the installation made apparently by such inspections or tests shall be rectified by the Sub-contractor at his own expense.
- (e) The Sub-contractor shall provide accurate instruments and apparatus and all labour required to carry out the above tests. The instruments and apparatus shall be made available to the services engineer to enable him to carry out such tests as he may require.
- (f) The Sub-contractor shall generally attend on other contractors employed on the project and carry out such electrical tests as may be necessary.
- (g) The Sub-contractor shall test to the services engineer's approval and as specified elsewhere in this specification or in standards and regulations already referred to, all equipment, plant and apparatus forming part of the works and before connecting to any power or other supply and setting to work.

(h) Where such equipment, etc., forms part of or is connected to a system whether primarily or of an electrical nature or otherwise (e.g. air conditioning system) the Sub-contractor shall attend on and assist in balancing, regulating testing and commissioning, or if primarily an electrical or other system forming part of works, shall balance, regulate, test and commission the system to the service engineer's approval.

2.10 EXTENT OF CONTRACT WORKS

The work covered by this specification includes the supply, delivery, installation, setting to work, commissioning to the satisfaction of the engineer and maintenance for a period of twelve months, of a Diesel Engine Generating set complete with all necessary ancillary equipment and as indicated.

2.11 CONFORMITY WITH SPECIFICATIONS

The equipment to be supplied shall conform in all respects to the specifications. Unless another standard is specifically mentioned in the specification, all materials and practices employed in the works must, where such standards exist be in accordance with the current KBS standards or code of practices or in accordance with such other authorized standard appropriate to the country of manufacture as in the opinion of the Engineer ensures equivalent or higher quality. .

Alternative which deviate in any respect from the specifications may only be submitted in addition to the main offer required by the Specification. Such alternative must be fully detailed and the price indicated may be considered for adoption after the comparison of quotation submitted in accordance with the Specifications.

2.12 INFORMATION REQUIRED FROM TENDERS

Each tender shall be accompanied by 2 sets of technical manual showing general arrangement and typical details of the equipment offered.

All tender documents and any communications thereof shall be in English language.

2.13 SITE CONDITIONS

The contractor is deemed to have visited the site and if unable to locate it to apply to the Engineer for directions to enable him to do so. The contractor is deemed to have acquainted himself therewith as to its nature, position, means of access, etc and no claim in the connection will be allowed. No claim will be allowed for traveling or other expenses which may be incurred by the contractor in visiting the site or preparing a tender for the contract works.

2.14 TROPICALISATION OF COMPONENTS

All components shall fully be tropicalized and protected against mould growth.

2.15 SURFACE FINISH

All ferrous metal work shall be either painted or processed to give a rust proof coating. Ferrous metal work to be painted shall first to be either shot blasted or thoroughly wire brushed to remove all scale and oxide and immediately given one brushed coat or two sprayed coats of primer.

After not less than four hours, one brushed or two sprayed undercoats followed by one brushed or two sprayed finishing coats of heat and oil resisting quality paint shall be applied.

Successive coats of paint shall be slightly differing shades. Interior surfaces of electrical equipment enclosures shall be finished white and all external surfaces shall be finished grey (Bs 2660, colour 9-097)

Engine crank cases shall not be painted internally unless the paint is resistant to the lubricating oil.

2.16 RECORD DRAWINGS

The Contractor shall provide to the engineer four sets of the following drawings:

- a) Where indicated a building drawing showing details of cable entries, pipe entries and ducts required, and the exhaust system.
- b) A general arrangement drawing showing the principal dimensions and weight of the set.
- c) A general arrangement of the diesel engine.
- d) A general arrangement of the alternator and exciter showing terminal markings, polarity and phase rotation
- e) A general arrangement of the electrical control panel(s).
- f) A schematic and wiring diagram of the electrical control panel (s)

2.17 MAINTENANCE MANUAL

Upon practical completion of the Contract works the Contractor shall furnish to the Engineer four copies of Manuals. The manuals shall be printed on good quality paper International A4 size and shall have stiff covers of durable materials.

The Manual shall contain full operating and maintenance instructions for each item of equipment, plant and apparatus set out in a form dealing systematically with each system. It shall include, as may be applicable to the contract works, the following and any other items listed in the text of the specification hereinafter:

- a) System Description
- b) Plant

- c) Valve Operation
- d) Switch Operation
- e) Procedure of Fault Finding
- f) Emergency Procedures
- g) Lubrication Requirement
- h) Maintenance and Servicing periods and Procedures
- i) Colour coding legend for all services
- j) Schematic and wiring Diagrams of plant, Apparatus and Switchgear
- k) Record Drawings, true too scale, reduced to international A4 size
- l) Lists of primary and secondary spares

The Manual is to be specially prepared for the contract works and Manufacture's standard descriptive literature and plant operating instruction cards will not be accepted for inclusion unless exceptionally approved by the engineer. The contractor shall, however, affix such cards, if suitable, adjacent to plant and apparatus. One spare set of all such cards shall be furnished to the electrical Engineer.

The maker's name, the rating of the set, the contract number, the location of the site and the year of installation shall appear on the front covers.

2.18 FACTORY TESTS

The set shall be tested as a unit for the output up to its rated capacity, at the manufacturer's workshop (or elsewhere by agreement) for output and performance generally in accordance with the requirements of BS 649 and as 2613.

The Engineer shall be given adequate notice in writing of the date and time of the work tests and he, or his representative shall if he so desires, be present at such tests and given all reasonable facilities for his own inspections during the course of the tests.

Whether or not the Engineer or his representative attends the tests, he shall be furnished, by the Contractor, with copies of all relevant tests certificates.

2.19 INSTALLATION

Installation of all plant and equipment shall be carried out by the contractor under adequate supervision from skilled staff provided by the plant and equipment manufacturer or his appointed agent.

Plant or equipment which are shipped before the relevant test certificate has been approved by the Engineer shall be shipped at the contractor's own risk and should the test certificate not be approved; new tests may be ordered by the Engineer at the contractor's expense.

2.20 SPARE PARTS

The contractor shall submit with his tender a separate priced list of recommended spare parts including any optional extras which he recommends should be purchased for the set and its control equipment and are not supplied as standard with the unit. The initial spares required at handover shall be deemed to have been included in the tender pricing.

2.21 TOOLS

A complete set of tools and general and special testing equipment shall be provided, including grease and oil guns, necessary for the normal maintenance of the set and its controls.

The tools shall be of the best quality, the spanners being of chrome vanadium steel, and shall be contained in a suitable robust steel tool box with lid fitted with a lock and two keys. All tools and testing equipment may be used by the Contractor in the execution of the contract works but will not be accepted as part of the Contract works by the Engineer unless they are handed over in clean and undamaged condition, in perfect working order and effectively in new condition.

2.22 MAINTENANCE PERIOD

The Contractor shall maintain the complete set and associated control equipment forming the unit for a period of twelve calendar months from the date that the unit is put into commission and regular use.

During this maintenance period, the contractor shall at his own expense.

- a) Make good any defects in the unit and replace any parts that fail or show signs of weakness or undue wear in consequences of faulty design, workmanship or materials.
- b) Visit the site with all diligence and attend to any such defect that arises within 48 hours of receiving notification of the defect.
- c) Carry out regular examination and services of the unit at the intervals laid down by the manufacturer, or every three months, whichever is the sooner, the service examination to include all necessary adjustments, greasing, oiling, cleaning, changing of lubricating oils (where necessary) to keep the unit in sound and efficient working order.
- d) Instruct the maintenance personnel in the proper operation, care and maintenance of the set and its equipment.

If during the maintenance period the unit is or is likely to be out of use for a period greater than 48 hours, due to the unit or part thereof developing a defect attributable to faulty design, workmanship or materials, or due to neglect of maintenance by the

Contractor, the Contractor shall at his own expense immediately provide and install on free loan a suitable temporary unit for use until the required repair or replacement has been satisfactorily undertaken and the original set (or its replacement) put to proper working order.

At the end of the twelve months period of maintenance the Contractor shall (in addition to normal servicing work) carry out a compressive examination and test of the set and its auxiliaries, to ensure that the unit is in proper working order and in satisfactory condition for handing over to the Engineer whose representative shall be present at such examination and test.

2.23 MAINTENANCE CONTRACT

The Contractor may be called upon to enter into maintenance contract with the Employer for the servicing the Generating sets after the expiry of the initial maintenance period. The Contractor shall indicate his willingness to carry out this service at the time of tendering and shall ensure that component personnel are available locally to be called at short notice to attend to Generator faults.

2.24 TRANSPORT AND STORAGE

All plant equipment shall, during transportation, be suitably packed, crated and protected to minimize the possibility of damage, and prevent corrosion or other deterioration.

On arrival at site all plant and equipment shall be examined and any damage to parts and protective priming coats made good before storage or installation

APPENDIX TO GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

The electrical sub-contractor shall comply with the following: -

- a) Government Electrical Specifications No. 1 and No. 2.
- b) All requirements of Kenya Power and Lighting Company Limited, and Communications Commission of Kenya (CA).

SCHEDULE OF CONTRACT DRAWINGS

SCHEDULE OF CONTRACT DRAWINGS

DRAWING NO.	DRAWING TITLE
As shall be issued by the Engineer	

SECTION F
PARTICULAR SPECIFICATIONS
OF
MATERIALS AND WORKS

PARTICULAR SPECIFICATIONS

1. SITE LOCATION

The site of the proposed works is at **KENYA CHANCERY BUILDING - ADDIS**

2. DESCRIPTION OF THE PROJECT

The works to be carried out comprise the following;

- i) Supply, installation, testing and commissioning of Electrical Works and Generating Set
- ii) Produce test result, warranty certification, reports and as installed drawings.

3. REGULATIONS

The contractor shall, in execution and completion of the works in the detailed design for which he is responsible, comply with the provisions of the following as necessary and relevant;

- a. International Standards Organization
- b. Latest Edition of IEE Wiring Regulation

4. WORKING DRAWINGS

The Contractor shall submit to the Project Manager working drawings for the proposed system for approval. The drawings will show the locations of and identifiers for all cable routing and terminations, telecommunication outlets/connectors. Location of core switch and Edge switches.

5. LED LIGHT FITTINGS

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
p.f	≥ 0.9	
Frequency	45 – 55 Hz	
Operating Temp. Range	10° - 40°C	
Operating Voltage Range	150 Vac to 300 Vac	
THD	≤ 15%	
Colour Temperature	4000 – 6500K	
Median Useful Life	L70B50 at 40,000 Hours	

6. CLIMATIC CONDITION

The following climate conditions can apply at the site of the contract works and all the plant, equipment, apparatus, materials and installations shall be suited for these conditions:

Mean maximum temperature	25	°C D.B.
Mean minimum temperature	14	°C D.B.
Range of relative humidity	60% - 63%	
Salt content in the atmosphere	0.08%	
Altitude	2355 metres above sea level	
Solar radiation, June	630 mean max. Langleys.	

High rainfall occurs during most periods of the year and the contractor shall be deemed to have taken account of this factor both in his process and in his planning of the execution of the contract works.

Equipment de-rating factors for the temperature and altitude shall be stated.

7. OPERATING CONDITIONS

The equipment and all components shall be suitable for the operation in ambient conditions of 24°C to 36°C and up to 100% relative humidity

- i) in an unheated ventilated building
- ii) In the open air as specified

Unless otherwise stated all ratings of equipment and components shall be interpreted as site rating and NOT sea level or other ratings.

8. FUNCTIONAL OBJECTIVES

The set shall be capable of operating continuously and satisfactorily in a medium dust laden atmosphere as defined in BS 1701 and in accordance with BS 649.

The generating set is required for standby duty and will be connected to the switchboard through a circuit. It shall have an automatic mains failure control, appropriately interlocked with the other incoming supply. Provisions shall be made in the control circuit of the generator for automatic and remote push button control, including the terminals and cable glands for all external cables, which will be supplied by others, where specified. It shall also be possible to start, operate and stop the set manually, independent of any automatic features.

Within the operating conditions specified in part 3 above the set shall be capable of starting and accepting full load within the shortest possible time, and in any case, in not more than 10 seconds. Any special features included to achieve this shall be stated in the information to be supplied by the tenderer.

9. SCOPE OF THE CONTRACT WORKS

The work covered by this Specification includes the design, manufacture, supply, delivery, installation, commissioning and testing to the satisfaction of the Engineer and maintenance for a period of twelve months of a new generating set complete with all necessary ancillary equipment.

The equipment to comprise **100KVA**, 400 volts/3 phase /50Hz prime rated diesel generator set with all integral accessories, and all necessary equipment for the safe and efficient working of the set. The diesel generator set will be site rated at level of 2200 metres, Kenya Datum.

Diesel generator set to include:

- a) Push button starting, starting battery and mains power supply trickle charger to be included.
- b) 72-hour operational running capacity auxiliary fuel oil storage tank, loose transfer pump and duplex oil strainer.
- c) An integral belly/ base fuel tank for daily service with an operational running capacity of 8 hours
- d) All interconnecting pipe work, valves and fittings between the storage tank, base tank and the diesel engine.
- e) An automatic generator control unit
- f) A diesel generator control cubicle
- g) Acoustic enclosure/ sound attenuated canopy
- h) All local wiring
- i) Maintenance tools and spare parts as specified.

10. PERFORMANCE OBJECTIVE

Within the operating conditions specified the set, equipped with its standard air intake filters, shall be capable of delivering its rated output continuously at rated voltage and 0.8 lagging power factor and of delivering 10% in excess of the continuous maximum rating for a period of one hour in any 12-hour period.

The steady state voltage shall be maintained within $2\frac{1}{2}\%$ of the rated voltage under control of the voltage regulator between the cold start ambient conditions and the maximum working temperature, from no load to 10% overload and from unity to 0.8 lagging power factor. After any change of load, the voltage shall not vary by more than + 15% of the rated voltage and shall return to within $\pm 3\%$ within 3 seconds and to within $2\frac{1}{2}\%$ of rated voltage within 1 seconds. On starting the voltage overshoot shall not exceed 15% and shall return to within 3% in not more than 3 seconds.

The governing of the set shall be such that the steady load speed band shall not exceed 1% of rated speed. Sudden removal of the full load at rated frequency shall not cause the frequency to rise above 110% of the rated frequency and it shall return to within 105% of the rated frequency within 3 seconds. The resultant steady state frequency shall return to 104% within 15 seconds. If full load is then reimposed the frequency shall not fall below 94% of rated frequency and shall return to 99% within 3 seconds and to the rated frequency within 15 seconds. The cyclic irregularity of the set at full load shall not be worse than 1/150.

The deviated interference shall be suppressed to the limit specified in BS 800 and BS 833.

11. GENERATING SET ARRANGEMENT

Unless otherwise indicated the set and its auxiliaries shall be mounted on sufficiently substantial under-base. All items which must be held in correct relative alignment shall be located by means of dowels.

The set shall be designed and supplied for operation bolted to the floor on robust anti-vibration and shock absorbing devices. They shall have adjusting screws for optimum setting and levelling and be so designed and installed that no appreciable engine vibration shall be transmitted to the floor or to any surrounding.

Bearings shall be suitable for operation over long periods without the need for replacement of the lubricant. Oil lubricated bearings shall be fitted with a visible oil level gauge.

12. DIESEL ENGINE

12.1. GENERAL

The engine shall comply in design and performance with BS.649 "Diesel Engines for General purposes" or its approved equivalent. The engine shall be designed for satisfactory operation on fuel oil and lubricating oils complying with BS. 2869.

The engine shall be totally enclosed, with forced lubrication from an integral pump having on the suction side a coarse strainer and on the delivery side a dual 'full flow' fine filter with a changeover cock incorporating pressure by-pass, so that the oil flow to the engine is maintained if the filter should choke. Alternatively, a single filter of the self-cleaning type fitted with a by-pass relief valve and having the same filtration performance may be provided. Manual lubrication of any part of the engine will not be accepted. The capacity of the lubricating oil system shall be sufficient to enable the engine to run continuously for 12 hours at any load without replacement.

A filter with a by-pass relief valve shall be inserted in the fuel line immediately before the pump(s). The fuel filter element shall be incapable of passing particles larger than micrometers. The fuel system shall be so arranged that fuel resulting from filter, pump or pipe spillage shall be incapable of entering the engine sump.

Air filters complying with KS 06-294: 1986, Grade 'A' and Grade 'B' suitable for use in a dusty atmosphere shall be fitted on the engine air intake(s)

No significant critical speed of the complete shaft system, including the generator, shall be within 15% of the rated speed.

A manually reset overspeed trip shall be fitted to stop the engine if its speed exceeds the rated speed by 15%. A mechanical trip is preferred but an electrical overspeed trip may be offered. Both types shall be equipped with a pair of contacts which close on operation of the trip. If the device is belt driven, at least two belts shall be provided and the drive shall be capable of carrying full load with one belt removed.

The set shall be arranged such that on shut-down the cooling water temperature shall not rise with residual heat so that the high water temperature lock-out operates. The engine may be naturally aspirated as pressure charged, or as indicated.

The starting shall be by means of electricity supplied from a starter battery. The starter motor shall be of axial type, de-energizing by a device operated from the engine. A means of manual starting shall also be provided.

Suitable means shall be provided for running by hand the engine main shaft and the associated generator to facilitate inspection and overhaul.

If weekly test runs are insufficient to prevent the drying out of the bearings, means shall be provided to ensure that the bearing surfaces are adequately and automatically wetted with lubricating oil either periodically or immediately prior to every start.

The engine shall be capable of being started from any crank position.

A thermostatically controlled 240-volt immersion heater may be fitted in the engine lubricating oil sump to facilitate starting. The heating surface loading of any lubricating oil heater(s) shall not exceed 0.015 watt per square millimeter to avoid carbonization of oil.

An efficient exhaust silencer with adequate draining facilities shall be supplied, and shall either be mounted on the set or installed in a generator room constructed as shown on the drawing indicated. The exhaust silencer system shall be so arranged that it may be readily relocated if required. Where any additional piping bends and fittings are specified, the manufacturer shall advise on any problems involved.

12.2. FUEL SYSTEM

An auxiliary fuel storage tank whose minimum capacity shall be sufficient to run the engine continuously on full load for 72 hours shall be installed in the position indicated in the contract drawing. It shall be supplied complete with supports.

The tank shall be fitted with a hand operated fuel with a flexible suction hose to permit filling from a drum on the floor.

A three-way cock shall be fitted in the line from tank to the engine to enable the fuel to be supplied from a source other than the storage tank.

The position of the cock shall be clearly marked 'MANUAL, AUTOMATIC, OFF' as applicable.

A duplex oil filter shall be supplied between the storage tank and the diesel engine. The duplex filter shall be capable of being cleaned without dismantling, or in interruption of the fuel flow, and shall be easily maintainable. The tank shall be equipped with a graduated dipstick, a clearly visible contents' gauge (not of the site glass type) and with drain, vent, overflow and inlet and outlet connection.

The set shall also have an integral belly/base fuel tank for daily services with an operational running capacity of 8 hours.

12.3. LUBRICATING OIL SYSTEM

An engine driven integral gear type lubricating oil pump shall be provided. The lubricating oil system shall include an oil cooler and fine mesh filters, together with devices to indicate lubricating oil pressure and to initiate a 240 volt A.C. Lubricating oil Low Pressure Alarm, Lubricating Oil High Temperature Alarm and Cooling Water High Temperature Alarm.

As separate 240 volt A.C. Motor driven automatic lubricating oil priming pump shall be provided for intermittent operation when the diesel is lying idle.

12.4. STARTING OF ENGINE

The diesel generator set shall have facilities for local and remote push button starting, with a Local/ Remote/ Automatic selector switch at the local panel.

On mains failure the engine shall be capable of being automatically started from battery located near the generator set.

The battery shall be complete with drip tray and trickle charger.

All necessary relays, contacts, switches and miscellaneous items for the starting sequence shall be supplied and installed in the local control panel.

The system shall be designed to give maximum reliability in starting.

The Contractor shall state in detail his proposals to ensure reliable starting and prevention of deterioration of the diesel engine, generator and exciter during idle periods.

All manually operated valves and controls on whose setting the correct operation of the automatic starting equipment depends shall be provided with locking devices.

12.5. COOLING SYSTEM

The engine may be air or water cooled unless a preference is indicated.

12.5.1. AIR COOLING OF ENGINE

Cooling air for the engine and lubricating oil shall be provided by fan(s) mechanically driven from the engine. The cooling system shall be adequate for the total requirements of the engine when running on continuous full load and on 10% overload for one hour in accordance with BS 649 and under the conditions of Section 3.

The engine shall be so designed that the cooling air discharges into or is drawn through a reasonably airtight ducted assembly enclosing the lubricating oil cooler, the cylinder barrels and the cylinder heads of the engine.

This assembly shall terminate in a flanged outlet to which trunking may be readily attached when necessary, to enable hot air from the cooling system to be discharged outside the building.

Belt driven fans shall have at least two belts and the drive shall be capable of transmitting the full load with one belt removed. The cooling air temperature shall be controlled so as to maintain a safe working temperature of the cylinder head(s) and the engine shall shut down if the maximum is exceeded.

12.5.2. WATER COOLING OF ENGINE

A radiator of the air blast type shall be provided. It shall either have separate sections for water and for lubricating oil or be arranged for jacket water cooling only.

The radiator shall be mounted on the set and the fan(s) shall be mechanically driven from the engine. Where indicated the radiators shall be suitable for remote wall or floor mounting, in which case the fan shall be electric motor driven from a supply similar in voltage, phase and frequency to the alternator output and shall be started on line.

Where remotely mounted, the fan shall only operate when generating set is running and shall be controlled by a thermostat mounted in the radiator such that the fan motor will start on rising temperature 50°C and stop on falling temperature.

Belt driven fans shall be provided with at least two belts and the drive shall be capable of transmitting the full load with one belt removed. Circulation of the jacket water and lubricating oil through the respective radiator sections and /or heat exchanger shall be by means of pumps mechanically driven by the engine. Belt driven pumps shall be provided with at least two belts and drive shall be capable of transmitting the full load with one belt removed.

Circulation by thermo-syphon will be accepted provided the engine will operate under the conditions of section 6 and in accordance with BS 649.

An easily visible flow indicator provided with contacts shall be fitted in the water outlet from the engine; the contacts shall close in the 'no flow' condition and shut down the set.

Alternatively, in thermo syphon systems and sealed or pressurized radiator systems the flow indicator may be dispensed with providing the engine shuts down by the operation of the high temperature or low oil pressure safety devices in accordance with section 8.3.

A thermostatically controlled diverter valve shall be inserted in the engine water discharge pipe with a return to the circulating pipe section, to maintain the circulating water at the optimum temperature irrespective of the load. Alternatively, a thermostatic bypass will be accepted.

A radiator make-up/expansion tank, fitted with float control inlet, shall be provided. If a sealed or pressurized unit is offered the tank may be dispensed with.

Where indicated provision shall be made on the radiator framework to permit the attachment of ducting for the discharge air.

A thermometer shall be mounted near the cylinder head(s) to indicate water temperature. Where a lubricating oil cooler is fitted, thermometers shall be mounted at the oil inlet too and outlet from the engine. Alternatively, thermocouple may be provided at all thermometer positions and taken to an instrument panel.

Adequate drains shall be provided at low points in the water and lubricating oil systems of the radiator and, where applicable, of the heat exchanger.

12.6. GOVERNING SYSTEM

Governing shall conform to B.S. 640 Class A. The governor shall control the frequency within the limits stated in Section 6 Part. Manual speed adjustment shall be provided over a range of +/-15% of the rated speed at any load. The governor system shall be of the mechanical or hydraulic type. In addition, the engine shall be fitted with an approved over speed trip device which shall operate independently of the normal speed governor and shall act directly upon the fuel supply to the engine.

The over speed shall act at a speed of 12% to 15% in excess of normal operating speed.

12.7. EXHAUST SYSTEM

The diesel engine shall be provided with a suitable exhaust system for horizontal discharge outside the diesel generator room.

The silencer shall be of spark arresting type and shall be equipped with cleaning and draining arrangements.

If an exhaust driven turbo-charger is supplied it shall include air intake filters, manifolds and outlet manifolds.

All necessary ducting, piping, supports and lagging required for the system shall be included.

Weatherproof wall boxes permitting expansion shall be fitted where the exhaust piping passes through the building wall or roof. Pipe work shall be connected at site by butt weld connections or use of flanged joints. The use of screwed connectors shall be avoided

Flanges shall conform to the appropriate Table of B.S.10: 1962. Welding of flanges at site shall be carried out in accordance with B.S.806. The faces of flanges shall be machined and the backs shall be machined or spot faced to receive the bolt heads.

Valves and fittings shall be of approved design and manufacture and shall be subject to the same tests as the highest pressure piping or vessel to which they are connected.

12.8. ENGINE INSTRUMENTS

Unless otherwise indicated the following instruments shall be provided:

- (a) a lubricating oil pressure gauge
- (b) a running hours meter
- (c) a tachometer
- (d) a water thermometer
- (e) an exhaust gas pyrometer or thermometer mounted near the manifold
- (f) lubricating oil thermometers on the inlet to and outlet from the engine, when a lubricating oil cooler is fitted
- (g) Exhaust turbo-blower pressure gauge(s) as applicable

12.9. PIPEWORK, VALVES & FITTINGS

All piping shall comply with requirements of KS-259:1989 for mild steel pipes.

Provision shall be made for ready handling of all parts of the plant during assembly or disassembly of the unit.

Adequate provision shall be made for attaching lifting devices, slings and eyebolts.

13. THE GENERATOR (ALTERNATOR & EXCITER)

13.1. GENERAL

The generator shall comply with B.S.2613:197, for service in tropical conditions, and shall withstand being idle for considerable periods without any harmful drop in the insulation resistance.

The generator shall have a prime rated net output of **100KVA**, at 0.8 lagging power factor, 400 volts, 3 phase, 4 wire, 50 Hertz with brushless rotating rectifier excitation system and voltage regulator. It shall be directly coupled to the engine and be sized such that it will accept the maximum output of the engine including overload. The output voltage shall be maintained within plus or minus 2 ½ % from no load to full load conditions. The alternator shall be capable of operating within the range of plus or minus 15% of the nominal voltage according to the automatic voltage regulator.

Three phase machines shall be star connected, and a diagram showing the terminal marking and phase rotation shall be provided in the terminal box. Cables connecting the machine winding and machine terminals shall not have a higher de-rating factor for temperature than the windings.

The insulation shall comply with BS 2757 excluding Classes Y and A. The insulation shall have an oil, moisture and fungus proof finish, with a surface which will not retain dust or condensation. It shall be possible to put the set in service after long periods in unheated storage without necessarily drying out the insulation.

The alternator shall be capable of withstanding a short circuit for three seconds when under the control of the automatic voltage regulator.

13.2. EXCITATION

Excitation shall be by means of brushless direct coupled exciter armature.

The alternators shall be designed for an excitation voltage at full load of not less than 50 Volts unless prior approval is given.

13.3. ELECTRICAL CONTROL PANEL

The Automatic Mains Failure control panel shall be provided and fitted with the following: -

- a) Two four pole contactors and two TP & N incoming MCCB's each of suitable rating for controlling the supply from the mains transformer and standby generator.
- b) An automatic voltage regulator for the set.
- c) Control equipment as necessary including phase failure protection relay for both the mains supply and the generator supply (with both under and over voltage protection) and phase sequence protection relay for the mains supply all to fulfill the functional requirements and automatic changeover as detailed in Part 9.3.2

- d) One ammeter and a selector switch to measure each phase current and neutral current
- e) One voltmeter and a selector switch to read line to line and line to neutral voltage
- f) A frequency meter

The meters shall comply with BS 89, table 7.

13.3.1. GENERAL

The set is to be used for mains failure duty and an automatic starting panel shall be provided which shall contain all necessary equipment for controlling the automatic starting and stopping of the set, lubricating oil priming (if necessary), all auxiliaries, fault warnings and shut downs. All faults, warning and shut-downs shall be separately indicated. There shall be test facilities for indication lamps, etc., preferably by means of a single test button.

Means shall be provided for isolating all supplies to the starting panel either by an isolating switch or by withdrawable fuses.

When the set is stopped other than under lock-out conditions, it shall be self-resetting ready for the next start.

The set shall be suitable for starting by manual means. e.g. by cranking or direct operation of the starter solenoid.

All switches and push buttons shall be clearly marked to indicate their function.

It shall be possible to operate the 'Start' and 'Stop' buttons and to see the 'Set Failure' indications without opening the panel doors.

13.3.2. AUTOMATIC CHANGEOVER CONTROLS

The controls shall be installed and wired in the machine control panel.

The control shall be provided such that on failure of the normal electricity supply, it will automatically initiate the starting of and effect the transfer of load to the standby generator. The schematic for the controls shall be approved by the Electrical Engineer before manufacture commences.

Where failure of the normal supply is referred to, it shall be defined as follows:

- a) Complete loss of voltage in one line or in all the three lines
- b) Falling of voltage below 85% of the normal voltage between two lines or line and neutral
- c) Voltage overshoot to 110% of the normal voltage between two lines or line and neutral

d) Incorrect phase sequence

On failure of the normal supply, the unit shall operate in the following manner:

- (a) After a delay, adjustable from 0 to 15 seconds (to avoid operation by a transient dip in voltage) a signal shall be given to start the standby generating set.
- (b) On receipt of a signal from the standby generating set that it is ready to take load, and providing that the failure of the normal supply still persists, the normal supply contactor in the control panel shall open and the standby contactor shall close. If the normal supply has been restored before the changeover has taken place, the contactor shall not operate and the starting relay contacts shall open to initiate the shutting down of the standby generating set.

When the standby supply is in operation and the normal supply is restored and remains within 10% of rated voltage on all phases for a pre-set time (adjustable up to 120 second) the standby contactor shall open and the normal supply contactor shall close; the starting relay contacts shall then open to shut down the generating set.

Provision shall be made so that automatic return to normal supply can be prevented if required.

Once a start signal has been sent to standby generating set, the engine starting sequence shall be allowed to continue until the set is ready to take the load before a stopping signal is sent.

A push button labelled 'Test' shall be provided to enable a failure of normal supply to be simulated. If the button is pressed and released the equipment shall complete the starting sequence, and when the set is ready to take load it shall be shut down. If the button is held depressed the equipment shall change over to the standby supply when the set is ready to take load.

Indicating lamps or illuminated panels shall be provided on the front of the panel. They shall be appropriately labelled, easily visible and shall give the following information:

'Main Supply Available'

'Generator Supply Available'

'Mains Supply on load'

'Generator Supply on load'

13.4. LOCK OUT

13.4.1. GENERAL

The set shall stop and lock out to prevent further starting when:

- a) It fails to start when the electric starter motor has been in operation for 20 seconds under automatic start condition.

- b) The lubricating oil pressure falls to a value at which it would be unsafe to continue running the engine.
- c) The cooling water does not flow, when the engine is fitted with a visible flow indicator on the cooling water system.
- d) (i) In water cooled engines the cooling water temperature exceeds a predetermined limit.
(ii) In air cooled engines the cylinder head temperature exceeds a safe maximum.
- e) The overspeed trip has operated.

13.4.2. Failure of the circuits concerned in sub-section 13.4.1 (b) to 13.4.1(e) shall cause a set to shut down. Reset of lock out shall be by hand.

13.5. FAULT INDICATION

Each lock-out detailed in section 13.4.1 shall be indicated by a lamp on the panel together with an indication of the fault causing the shut-down. The fault warning lights shall be set to operate before the lock-out.

13.6. STARTING BATTERY AND CHARGER

The battery shall be 24 volts and capable of with-standing the loads imposed upon it by its specified duties. It may be of lead-acid or alkaline type and shall be of sufficient capacity for four starts in succession once in an eight-hour period. Auxiliary circuits connected to the battery shall be protected by fuses.

The battery shall be used to supply an automatic starting and control equipment, and relay operation shall not be impaired when the battery is supplying current to the starter motor.

A single phase supply for battery charging shall be available from the main L.V SWITCHBOARD.

A charger shall be provided which will recharge the battery after engine starting and maintain it in a charged condition when the set is standing or is in service. It may also supply the load of any automatic starting and control equipment, and an additional load up to 24 watts when the set is running and in service.

An alternative quick charge rate shall be provided. The charger shall be fitted with an ammeter to measure the charger and discharge current excluding the starter motor current.

13.7. WIRING AND EARTHING

Power cables and small wiring cables interconnecting major components shall be of the heat and oil resistant type and shall be metal sheathed or run in metal ducts or metal conduit, which shall be coded and terminated with lugs or eyes or to be soldered, the terminations shall be clearly marked with the numbers and letters of the terminals to which they are connected. Terminals shall be numbered or lettered, easily accessible and fitted with individual insulating barriers or adequately spaced. Barriers shall be fitted to separate control terminals from power wiring terminals.

All metal work housing electrical equipment shall be bonded to a brass earthing terminal and connected to station Earth and as detailed in the schedule.

13.8. CONTACTORS

Contactors shall have magnetic circuits designed for a.c or d.c operation and shall be rated in accordance with KS 04-182: 1982. Four pole- contactors shall be fitted for three phase-equipment and two-pole contactors for single phase equipment. Main and auxiliary contacts shall be silver faced or better.

13.9. RELAYS

Relays shall preferably be of sealed type mounted in approved plug-in bias with spring loaded retainers but if this is not practicable they shall be mounted on individual sub-bases and wired so that easy access is obtained to soldered connections. Unsealed relays shall be enclosed in individual or common dust protecting cases.

Time delays, if of the pneumatic type, shall operate on filtered air. The thermal type of time delay relay will not be accepted.

13.10. FUSES

Fuses shall comply with KS-183:1978. A spare fuse cartridge for each pole shall be mounted inside each equipment.

13.11. RECTIFIERS, CAPACITORS AND SOLID STATE COMPONENTS

Rectifiers, capacitors and solid state components shall be suitable for any transient voltage and high currents likely to be encountered during the operation of the equipment and for the internal operating temperature of the enclosures at the specified maximum external ambient temperature.

13.12. ENCLOSURES FOR EQUIPMENT

Enclosures for electrical and control equipment shall be drip proof and dust protecting, with adequate front and rear access as necessary for maintenance and repair. Special attention shall be given to the method of construction and to the mounting of the components to minimize the effect of vibration. Diagrams of connections in durable form shall be mounted inside the enclosures.

14. LIFTING GEAR AND HANDLING

Provision shall be made for ready handling of all parts of the plant during assembly or disassembly of the unit. Adequate provision shall be made for attaching lifting devices, slings and eyebolts.

15. COMMISSIONING

The Contractor shall include for fully commissioning the set and its control equipment and for the purpose of the required tests, shall provide all necessary instruments, tools, fuel and lubricating oil.

The following tests and checks as applicable shall be carried out by the contractor in the presence of the electrical engineer or his representative.

- a) Check that the main frame is level in all directions, engine and generator shafts are in proper alignment and the vibration absorbing devices are properly installed and located.
- b) Check water and sump oil levels and that the water jacket and radiation eaters (if fitted) are in working order.
- c) Check the battery electrolyte levels and the specific gravity.
- d) Examine the containers in which the fuel and lubricating oils were delivered and check that the type and grade of oils are as recommended for the unit.
- e) Ensure that sufficient fuel oil is in the fuel tank for a two hours' test run.
- f) Check that all radiator and engine block water drain points are free from sludge and other blockages.
- g) Check engine bolts, main drive coupling, valve clearance, fuel pumps settings, governor settings, pipeline connections, water hose, exhaust couplings, flexible pipe work etc, and where a separate cooling water tank is fitted, that the water levels is satisfactory and the ball valve and overflow work.
- h) Check all outgoing connections on the generator and the control panel. All lugs for principal connections shall have clean and bright contact surfaces. A suitable abrasive shall be used where necessary.
- i) Check access panels and doors for proper opening and closing and for functioning of any interlocks fitted.

- j) With the set isolated from the main supply and the selector switch in the 'manual' position, start the engine by means of the 'start' push button and allow it to run up to normal speed. Check that the main battery charger is automatically switched off to avoid its being overloaded by the reduction in voltage across the battery. Where a battery charging dynamo is fitted, check that the main battery charger is disconnected by the operation of the auxiliary contact during the time the engine is running.
- k) Check instruments and gauges for normal operation and response and that the generator voltage is being maintained within the prescribed limits, making due allowance for no-load conditions. Compare the reading of the frequency meter with that of engine tachometer, where both are fitted
- i) Stop engine by turning selector switch to off position and verify that the generator contactor opens at between 95% and 85% of normal voltage. Re-check water and oil levels.
- m) Turn selector switch to 'Auto' position. Disconnect the sensing circuit supply and check that the set starts, the mains contactor opens, and the generator contactor closes in correct order. Reconnect the sensing circuit to verify that the engine stops on restoration of the mains supply and the contactors operate correctly. Check voltage sensing and time delays on each phase in turn and also the push buttons for mains failure simulation and engine stopping operate correctly.

NOTE: Running of the engine for any length of time under no load condition is undesirable and tests calling for such operation should be carried out in as short time as possible consistent with thoroughness.

- n) Operate the necessary isolators and switches to put the set on standby for essential services network with the mains failure simulation push, verify that the set operates correctly with the appropriate time delay for taking up load and that the carrying of the load and its distribution over three phases are satisfactory.
- o) Run the set at various loads for periods totaling at least 30 minutes. Check that the voltage and frequency are being maintained within the required limits with large alterations of load. Note the rate of charge on the dynamo ammeter with the engine running (if a dynamo is fitted), and the rate of charge on the battery charging ammeter with the engine stopped. Check against manufacturers recommendations and adjust charging rates if necessary.
- p) Check that the various engine safeguards operate satisfactorily.

- q) Check the vibration absorbing devices for proper operation and that performance of all flexible connections, both mechanical and electrical, is satisfactory.
- r) When all tests are satisfactory and agreed with the Engineer or his representative, the lubricating oil and water levels shall be finally checked, the fuel oil tank replenished and set left in normal operating order.
- s) An initial supply of all lubricating oils and greases shall be provided by the Contractor.

Additional lubricating oil shall be provided for recharging the engine sump once together with a supply of lubricating oils and greases to cover the normal use and serving of the set during the 12 months' maintenance period referred to in Part 14 of Section D

16. BROCHURES AND TECHNICAL LITERATURE

Tenderers **MUST** enclose together with their submitted bids brochures for store bought items and drawings for fabricated items detailing technical literature and specifications of **ALL** components of the system. The brochures shall be used to evaluate the suitability of these components.

Any bid submitted without the brochures and drawings shall be considered technically non-responsive, and will subsequently be disqualified.

SCHEDULE OF UNIT RATES

SCHEDULE OF UNIT RATES

1. The tenderer shall insert unit rates against the items in the following schedules and may add such other items as he considers appropriate.
2. The unit rates shall include for supply, transport, insurance, delivery to site, storage as necessary, assembling, cleaning, installing, connecting, profit and maintenance in defects liability and any other obligation under this contract.
3. The unit rates will be used to assess the value of additions or omissions arising from authorized variations to the contract works.
4. Where trade names or manufacturer's catalogue numbers are mentioned in the specification, the reference is intended as a guide to the type of article or quality of material required. Alternative brands of **equal** and **approved** quality will be accepted.

SCHEDULE OF UNIT RATES

NO.	DESCRIPTION	UNIT RATE (KSHs)
1.	PVC/SWA/PVC Copper cables per meter a) 4.0 mm sq. 3 core b) 6.0 mm sq. 3 core c) 10.0 mm sq. 4 core d) 35.0 mm sq. 4 core	
2.	IP 65 rated Isolators as SCHNEIDER, 3 Phase a) 32A	
3.	IP 65 rated Isolators as SCHNEIDER, Single Phase a) 32A	
4.	Distribution Boards a) 8 Ways TPN b) 12 Ways TPN c) 16 Ways TPN	
5.	Industrial Sockets outlets, 5 pin a) 32A	
6	Industrial Sockets outlets, 3 pin a) 32A	

BILLS OF QUANTITIES

BILLS OF QUANTITIES

PRICING OF PRELIMINARIES ITEMS

Prices will be inserted against item of preliminaries in the Contractor's Bills of Quantities and specification. These Bills are designated as Bill No.1 in this Section. Where the Contractor fails to insert his price in any item, he shall be deemed to have made adequate provision for this on various items in the Bills of Quantities. The preliminaries form part of this contract and together with other Bills of Quantities covers for the costs involved in complying with all the requirements for the proper execution of the whole of the works in the contract.

The Bills of Quantities are divided generally into three sections:

(a) Preliminaries – Bill No.1

Contractor's preliminaries are as per those described in Contract Preliminaries and General Conditions of Contract. The Contractor shall study the conditions and make provision to cover their cost in this Bill. The number of preliminary items to be priced by the Tenderer has been limited to tangible items such as site office, temporary works and others. However, the Tenderer is free to include and price any other items he deems necessary taking into consideration conditions he is likely to encounter on site.

(b) Installation Items – Other Bills

- (i) The brief description of the items in these Bills of Quantities should in no way modify or supersede the detailed descriptions in the contract Drawings, conditions of contract and specifications.

(c) Summary

The summary contains tabulation of the separate parts of the Bills of Quantities carried forward with provisional sum, contingencies and any prime cost sums included. The Contractor shall insert his totals and enter his grand total tender sum in the space provided below the summary.

This grand total tender sum shall be entered in the Form of Tender_provided elsewhere in this document.

SPECIAL NOTES TO THE BILLS OF QUANTITIES

1. The Bills of Quantities form part of the contract documents and are to be read in conjunction with the contract drawings and general specifications of materials and works.
2. The prices quoted shall be deemed to include for all obligations under the sub-contract including but not limited to supply of materials, labour, delivery to site, storage on site, installation, testing, commissioning and all taxes
3. All prices omitted from any item, section or part of the Bills of Quantities shall be deemed to have been included to another item, section or part.
4. The brief descriptions of the items given in the Bills of Quantities are for the purpose of establishing a standard to which the sub-contractor shall adhere to. Otherwise alternative brands of **equal** and **approved** quality will be accepted.

Should the sub-contractor install any material not specified here-in before receiving **approval** from the Project Manager, the sub-contractor shall remove the material in question and, **at his own cost**, install the proper material.

5. The grand total of prices in the price summary page must be carried forward to the **Form of Tender**.
6. Tenderers must enclose, together with their submitted tenders, detailed coloured manufacturer's Brochures detailing Technical Literature and specifications on all the equipment they intend to offer.

Statement of Compliance

1. I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.
2. I confirm I have not made and will not make any payment to any person, which can be perceived as an inducement to win this tender.

Signed: _____ *for and on behalf of the Tenderer*

Date: _____

Official Rubber Stamp: _____

BILL No. 1: PRELIMINARIES

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
1.1.01	This is a Firm-Price Contract and the contractor must allow in his tender for the increase in the cost of labour and/or materials during the duration of the contract. No claims will be allowed for increased costs arising from the fluctuations in duties and/or day to day currency fluctuations.	1	Item		
1.1.02	The Contractor shall, when required, provide for approval at no extra cost, samples of all materials to be incorporated in the works. Such samples, when approved, shall be retained by the Engineer and shall form the standard for all such materials incorporated.	1	Item		
1.1.03	The Contractor shall carry out such tests of the Contract Works as required by IEC Standard Specifications as customary. No testing or commissioning shall be undertaken except in the presence of and to the satisfaction of the Engineer. (Contractor's own preliminary and proving tests exempted).	1	Item		
1.1.04	The Contractor shall allow for Working Drawings as may be necessary. The Working Drawings shall be complete in such detail not only that the Contract Works can be executed on site but also that the Engineer can approve the Contractor's proposals, detailed designs and intentions in the execution of the Contract Works.	1	Item		
1.1.05	The Contractor shall allow for Record Drawings and Maintenance Manual of the installed Contract Works.	1	Item		
1.1.06	Allow for engineers cost for approval of sample fittings, pipes and associated work requirements on the project site	1	Item	30,000.00	30,000.00
1.1.07	Allow for profits and attendance for the above-----%	1	Item		
Total Amount Carried Forward to The Summary Page					

BILL No. 2 SCHEDULE No. 1: OFFICE

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
	<i>Supply, Install, Test and Commission as per BS 7671:2008 the following as described below:</i>				
	LIGHTING POINTS				
2.1.01	Lighting outlet point wired in 1.5 mm ² Twin With Earth PVC insulated CU cables drawn in 20 mm Ø HG PVC conduits clipped onto trunking including all accessories and excluding switch plates.				
	i) One way switched	135	No.		
2.1.02	Lighting outlet point wired in 3 x 1.5 mm ² SC PVC insulated CU cables drawn in 20 mm Ø HG PVC conduits clipped onto the soffit including all accessories and excluding switch plates.				
	i) One way switched	117	No.		
	LIGHTING FITTINGS				
2.1.03	Light Fittings complete with all accessories and lamps as follows:				
	a) Type B	26	No.		
	b) Type E	75	No.		
	c) Type W	16	No.		
	d) Type Exit	18	No.		
	LIGHTING SWITCHES				
2.1.04	10A Ivory Switch Plates flush mounted on partition wall as SCHNEIDER.				
	i) One Gang One Way as SCHNEIDER or Approved Equivalent.	35	No.		
	POWER POINTS				
2.1.05	13A Ring Mains Socket Outlet Points wired in 3 x 2.5 mm ² SC PVC insulated CU cables drawn in 25 mm Ø HG PVC conduits concealed in building fabric/trunking complete with all the necessary accessories excluding socket outlet plate.	60	No.		
2.1.06	20A Radial Extract Fan Point wired in 3 x 2.5 mm ² SC PVC insulated CU cables drawn in 25 mm Ø HG PVC conduits/Trunking concealed in building fabric complete with all the necessary accessories excluding DP Switch Plate.	6	No.		
	Total Amount Carried Forward to Next Page				

BILL No. 2 SCHEDULE No. 2 KITCHEN

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
	Brought Forward From Previous Page <i>Supply,install,test and commission as per BS 7671:2008 the following as described below:</i>				
	POWER POINTS CONT'D				
2.1.07	20A Radial Hand Drier Point wired in 3 x 2.5 mm ² SC PVC insulated CU cables drawn in 25 mm Ø HG PVC conduits/Trunking concealed in building fabric complete with all the necessary accessories excluding DP Switch Plate.	4	No.		
2.1.08	Radial Power Point wired in 4C 10.0 mm ² PVC/SWA/PVC CU cables drawn cable trays complete with all the necessary accessories excluding 20A Three Phase Industrial Socket for AC Outdoor Units .	35	LM		
2.1.09	Radial Power Points wired in 3 x 4.0 mm ² SC PVC insulated CU cables drawn in 25 mm Ø HG PVC conduits concealed in building fabric complete with all the necessary accessories excluding 20A Dual Pole Switch for AC Indoor Units .	15	No.		
	SOCKETS AND POWER SWITCHES				
2.1.10	13A Twin Switched Ivory Socket Outlet Plates as SCHNEIDER or Approved Equivalent .	60	No.		
2.1.11	13A Switched Fused Connection Unit as SCHNEIDER Approved Equivalent for the Fire Alarm Panel.	1	No.		
2.1.12	20A Ivory DP Switch Plate with Neon Light as SCHNEIDER or Approved Equivalent for Power Points.	10	No.		
2.1.13	63A Three Phase Industrial Socket Outlet with Backbox and Integral Isolator as SCHNEIDER or Approved Equivalent for the incoming and outgoing AC Outdoor Units .	2	No.		
Total Amount Carried Forward to Next Page					

BILL No. 2 SCHEDULE No. 2 KITCHEN

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
	Brought Forward From Previous Page <i>Supply,install,test and commission as per BS 7671:2008 the following as described below:</i>				
	DATA POINTS				
2.1.14	Data/Telephone Points in concealed 20 mm Ø HG PVC conduit and trunking complete with all accessories and draw wire left inside.	48	No.		
	CCTV/ACCESS CONTROL				
2.1.15	CCTV/Access Control Points in concealed 25 mm Ø HG PVC conduit complete with all accessories and draw wire left inside.	20	No.		
	POWER DISTRIBUTION				
2.1.16	100mm x 25mm perforated, steel, hot dip galvanised, cable tray for Lighting Tray complete with all accessories.	90	LM		
2.1.20	400mm x 25mm perforated, steel, hot dip galvanised, cable tray for Power Cables complete with all accessories.	90	LM		
2.1.21	250mm x 50mm deep two compartment metal trunking constructed from heavy gauge powder coated steel, and shall be complete with all accessories for coupling and earthing for power cables. The trunking shall be angular section. Allow for colour change to Architect's detail.	180	LM		
	i) Twin Outlet Plate	60	No.		
	ii) Dual Data/Telephone Outlet Plate	48	No.		
	iii) Carry out bonding throughout the entire length of the trunking and connect to earthing.	1	Item		
Total Amount Carried Forward to Next Page					

BILL No. 2 SCHEDULE No. 2 KITCHEN

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
	Brought Forward From Previous Page <i>Supply,install,test and commission as per BS 7671:2008 the following as described below:</i>				
	POWER DISTRIBUTION CONT'D				
2.1.23	12-way 100A TPN DB surface mounted complete with 100A TP integral isolator and lockable cover and all accessories excluding MCBs as SCHNEIDER or Approved Equivalent.	4	No.		
2.1.24	The following MCBs as SCHNEIDER or Approved Equivalent Type B.				
	i) 10A SP	8	No.		
	ii) 32A SP	8	No.		
	iii) 40A SP	4	No.		
	iv) 63A TP	4	No.		
	v) Blanking Plates	24	No.		
	FIRE DETECTION				
2.1.26	Heat Detector Point completely wired in wired in 2x1.5mm ² heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the detector.	4	No.		
2.1.26	Smoke Detector Point completely wired in wired in 2x1.5mm ² heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the detector.	42	No.		
2.1.27	Electronic Sounder and Beacon Point completely wired in wired in 2x1.5mm ² heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the unit.	4	No.		
2.1.28	Call Point completely wired in wired in 2x1.5mm ² heat resistant screened cables drawn in 20mmØ concealed HG PVC conduits including all accessories but excluding the unit.	4	No.		
2.1.29	Addressable Photoelectric Heat Detector with integral short circuit isolator as HONEYWELL or Approved Equivalent.	4	No.		
Total Amount Carried Forward to Next Page					

BILL No. 2 SCHEDULE No. 2 KITCHEN

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
	Brought Forward From Previous Page <i>Supply,install,test and commission as per BS 7671:2008 the following as described below:</i>				
2.1.30	Addressable Photoelectric Smoke Detector with integral short circuit isolator as HONEYWELL or Approved Equivalent.	42	No.		
2.1.31	Addressable Indoor Wall Sounder with Strobe Light and built in short circuit isolator as HONEYWELL or Approved Equivalent.	4	No.		
2.1.32	Addressable Resettable Call Unit incorporating integral short circuit isolator and reset key as HONEYWELL or Approved Equivalent.	4	No.		
2.1.33	1 Loop Addressable Fire Alarm Panel complete with 72 hour stand by batteries, test and reset buttons and supervisory buzzer as HONEYWELL or Approved Equivalent.	1	No.		
Total Amount Carried Forward to Summary Page					

BILL No. 2 SCHEDULE No. 2: GENERATING SET

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
2.2.01	Generating Set as described in the Particular Specifications	1	Item		
2.2.02	Steel exhaust pipe of not less than 14 SWG and of adequate diameter running from Generating Set to the outside of the generator room complete with Silencer	10	LM.		
2.2.03	Earthing Generating Set to Engineer's Approval.	1	Item		
2.2.04	Staff Training on the operation and maintenance of the Generating Set.	1	Item		
2.2.05	Fuel for site testing and commissioning of the Generating Set	1	Item		
2.2.06	Hot Air Ducting for Generating Set to Engineer's Approval	1	Item		
2.2.07	Load Bank Testing of Generating Set	1	Item		
2.2.08	Control Panel as described in the Particular Specifications	1	No.		
2.2.09	Manual by-pass switch as described in the Particular Specifications	1	Item		
2.2.10	Trickle battery charger as described in the Particular Specifications	1	No.		
2.2.11	Battery as described in the Particular Specifications	1	No.		
2.2.12	Armoured cables complete with accessories as follows:				
	(a) 70mm sq. 4 CORE PVC/SWA/PVC CU	100	LM		
	(b) 2.5mm sq. 4 CORE PVC/SWA/PVC CU	100	LM		
2.2.13	Interwire the control panel with the Mains L.V board	1	Item		
2.2.14	Auxilliary Tank as described in the Particular Specifications.	1	No.		
2.2.15	Fuel Pump for Item 2.2.14 above as described in the Particular Specifications	1	No.		
2.2.16	Manual Fuel Pump for Item 2.2.14 above as described in the Particular Specifications	1	No.		
2.2.17	Full Service for Existing Generator ARIETE QUIET GX110JD Engine Type John Deere 4045 HF158	1	No.		
Total Amount Carried Forward to Summary Page					

SCHEDULE OF LIGHT FITTINGS

Item	Description
	LIGHTING FITTINGS Light Fittings complete with all accessories and lamps as follows: a) Type B IP 65 LED Weatherproof 1200mm Luminaire, 29W,117Lm/W, 4000K LED,50000 hrs Lamp Life, Polycarbonate Housing and Optical Cover as PHILLIPS or approved equivalent. b) Type E LED 600 X 600 mm Luminaire, 29W,117Lm/W, 4000K LED,50000 hrs Lamp Life and Optical Cover as PHILLIPS or approved equivalent. c) Type W Circular 11W, 4000K, 115Lm/W, 50000 hrs Lamp Life, Surface Ceiling Light with Plastic Housing and Polycarbonate Diffuser as PHILLIPS for Washrooms. d) Type Exit Sign for viewing up to 30m distance,maintained operation, 3W, 3 hours emergency duration with LED strip and ISO Exit legends As THORN or approved equivalent. In addition, the LED Fittings should meet the following: 1. Operating Voltage Range: 130-300V AC 2. Operating Frequency Range: 45-55Hz 3. Power Factor: ≥ 0.9 Bidders MUST provide technical brochures of the LED fittings to determine their compliance with the above specifications.

MAIN SUMMARY PAGE

ItemNo.	Description	Amount(USD)
1.00	Bill No. 1 Preliminaries and General Conditions	0.00
2.00	Bill No. 2 Schedule No. 1 Office	
3.00	Bill No. 2 Schedule No. 2 Generating Set	
4.00	Bill No. 3 Provisional Sums	
	Total Amount for Electrical Installations	

AMOUNT IN WORDS

USD.....

.....

Bidder's Official Stamp

P.O. Box.....

Signature.....

PIN.....VAT.....

**TECHNICAL SCHEDULE
OF
ITEMS TO BE SUPPLIED**

TECHNICAL SCHEDULE

1. The technical schedule shall be submitted by tenderers to facilitate and enable the Project Manager to evaluate the tenders, especially where the tenderer intends to supply or has based his tender sum on equipment which differs in manufacture, type or performance from the specifications indicated by the Project Manager.
2. This schedule shall form part of the technical evaluation criterion, and tenderers are therefore advised to complete the schedule as they shall be considered non responsive.

NO.	DESCRIPTION	MAKE	MODEL NO.
1.	100 KVA Prime Rated Generator Set		
2.	Automatic Change Over Panel		
3.	Trickle Battery Charger		
4.	Battery		
5.	Auxiliary Fuel Tank		
6.	Automatic Fuel Pump		
7.	Manual Fuel Pump		
8.	Type B		
9.	Type W		
10.	Type E		
11.	Type Exit		
12.	Switch Plate		
13.	Socket Outlet		
14.	DP Switch		
15.	Heat Detector		
16.	Smoke Detector		
17.	Wall Sounder		
18.	Call Unit		
19.	Fire Alarm Panel		

**STRUCTURED CABLING, CCTV & ACCESS
CONTROL INSTALLATION WORKS**

1. PTZ CAMERA

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Type	Pan Tilt and Zoom	
Image Sensor	5MP 1 / 2.8" Progressive CMOS	
Frames Rate	30 Frames Per Second	
Compression	H.265 HEVC	
Connectivity	Wired UPoE 802.3af Class 0	
Focal Length	Automatic Varifocal (2.7 to 13.5 mm)	
Lens	30x Optical Zoom, Auto Focus	
Illumination	150 m Smart IR LED Illuminator	
Storage	Local Storage with 64GB SD Card	
Impact Protection	IK10	
Max Power	51W	
Wide Dynamic Range	120dB	
Interoperability	ONVIF Profile S/G	
Accessories	Pole Mount Adapter, UPOE Injector	

2. PIR DETECTOR

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Type	Bullet	
Detection Principle	Curtain, Long-Range	
Range (L x W)	150m x 3.3m	
Angle of Beam	1.3°	
Detection Speed Range	0.2 – 5 m/s	
Alarm Outputs	3	
Protection	IP 66	
Power Supply	POE	
Accessories	Pole Mount Bracket	

3. MOUNTING POLE

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Type	Galvanized Steel	
Height	6M Above, 0.7M Below Ground	
Diameter	100 mm	
Power Supply	12 Vdc, 18mA	
Features	Lockable Door & Cable Entry	

4. DOME CAMERA

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Type	Dome	
Image Sensor	5MP 1 / 2.8" Progressive CMOS	
Frames Rate	30 Frames Per Second	
Compression	H.265 HEVC	
Connectivity	Wired PoE 802.3af Class 4	
Focal Length	Automatic Varifocal (2.7 to 13.5 mm)	
Illumination	50m Range Smart IR LED Illuminator	
Storage	Local Storage with 64GB SD Card	
Ingress Protection	IP67	
Impact Protection	IK10	
Max Power	25.5W	
Wide Dynamic Range	120dB	
Interoperability	ONVIF Profile G/S	

5. BULLET CAMERA

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Type	Bullet	
Image Sensor	5MP 1 / 2.8" Progressive CMOS	
Frames Rate	30 Frames Per Second	
Compression	H.265 HEVC	
Connectivity	Wired PoE 802.3af Class 4	
Focal Length	Automatic Varifocal (2.7 to 13.5 mm)	
Illumination	60m Range Smart IR LED Illuminator	
Storage	Local Storage with 64GB SD Card	
Ingress Protection	IP67	
Impact Protection	IK10	
Max Power	25.5W	
Wide Dynamic Range	120dB	
Interoperability	ONVIF Profile G/S	

6. FLOOR SWITCH

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Mounting	Rack Mount	
Switching	Layer 2	
Ports	24 No.10/100/1000 Mbps RJ45 PoE+	
	2 No. 10G SFP+	
Switching Capacity	208 Gbps	
Power Budget	60W Per Port (UPOE)	
Advanced Features	1 No. RJ 45 Management Port	

7. CORE SWITCH

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Mounting	Rack Mount	
Switching	Layer 3	
Ports	2 No. 10/100/1000 Mbps RJ45 PoE	
	24 No. 10G SFP+	
Capacity	960 Gbps	
Power Supply	1+1 Hot Plug Redundant	

8. CAT 6A PATCH PANEL

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Port Density	24 No.	
Port Type	RJ45 Connector	
Cable Type	CAT 6A Shielded Twisted Pair	

9. FIBRE PATCH PANEL

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Port Density	12 No.	
Port Type	LC Connector	
Cable Type	8 Core Multimode Fibre Cable	

10. UPS

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Mounting	Rack Mount	
Power	3 kVA	
Output Voltage	± 5%	
Output Frequency	50 Hz	
Topology	Line Interactive	
Transfer Time	<10ms	
Battery Type	Maintenance Free	
Battery Recharge	≤ 3 Hours	
Battery Life	5 Years	
Battery Capacity	490 Ah	
Control Panel	LCD Status Console	
Serviceability	Replaceable Battery	

11. VIDEO MANAGEMENT SERVER

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Mounting	Rack Mounted	
Processor	Intel Xeon E-Series 3.4 GHz 8 Cores	
RAM	16GB	
Storage	512 GB Hot Plug SSD	
Operating System	Windows 10	
Software	Network Management	
	MAXPRO Video Management System	

12. DISPLAY MONITOR

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Size	60"	
Type	LED	
Aspect Ratio	16:9	
Resolution	4K (3840 x 2160)	

13. NETWORK VIDEO RECORDER TYPE 1

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Mounting	Rack Mount	
Channels	32 No.	
Storage	21 TB	
Configuration	RAID 6	
Fault Tolerance	1 Drive Failure	
In Bandwidth	120 Mbps	
Out Bandwidth	120 Mbps	
Output	1 No. HDMI	
Interface	2 No. RJ45 10/100/1000 Mbps	
Power Supply	1+1 Hot Plug Redundant	
OS	Windows Embedded Standard 7, 64 Bit	

14. NETWORK VIDEO RECORDER TYPE 2

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Mounting	Rack Mount	
Channels	32 No.	
Storage	4 x 10 TB SATA	
Bandwidth	32 x 5 Mbps	
Output	1 No. HDMI	
Interface	2 No. RJ45 10/100/1000 Mbps	
Power Supply	1+1 Hot Plug Redundant	
OS	ADPRO XO Security Operating System	

15. VIDEO WALL

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Number of Displays	8 No.	
Screen Configuration (W X H)	4 x 2	
Dimensions (WXHxD)	4.85 X 1.37 X 0.07 m	
Diagonal Dimensions	5 m	

16. RISING BOLLARD

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Type	Hydraulic	
Obstacle Diameter	273 mm	
Impact Resistance	150,000 Joules	
Obstacle Height	800 mm	
Underground Case Depth	1240 mm	
Visibility	Integrated LED Stripe	
Control Panel	PLC c/w Display	
Hydraulic Oil	No. 46	

17. X-RAY BAGGAGE SCANNER

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Tunnel Dimension	500 mm x 300 mm	
Conveyor Speed	0.22 m/s	
Conveyor Load	170 kg	
X-Ray Leakage	<0,05 µGy	
Monitor	19" LCD	
Image Resolution	1024 x 1280 Pixels	
Image Greyness	4096	
Image Processing	Enhancement, Reversion & Rewind	

18. WALKTHROUGH METAL DETECTOR

Bidders MUST fill the proposed solution and attach HIGHLIGHTED datasheets/brochures to assess their conformity/compliance with each of the technical specifications.		
ITEM	MINIMUM SPECIFICATIONS	PROPOSED SOLUTION
Detection Zones	33	
Sensitivity Setting	0-255	
Dimensions	2210 x 840 x 460	

19. CABLES

19.1. STP CABLE

The STP cable shall be category 6A compliant STP cable, with the following specifications;

- 4-pair cables with 100-ohm impedance.
- Compliant to standards such as TIA/EIA – 268-B. 2-1 and IEC 61156-5
- Made of polyethylene insulation

- d. Pulling force should support up to 50N/mm²
- e. Low Smoke Zero Halogen outer sheath

19.2. OPTICAL FIBRE CABLE

The fibre cable shall be 8 core multimode fibre with the following specifications: -

- a. Cable size: 8 core.
- b. Termination: SC Duplex connectors.
 - a. Rated Index: Nominal 62.5/125 micro. m

20. TESTING AND COMMISSIONING OF THE SYSTEM

Upon completion of the installation, all cabling links must be tested for the following parameters, using Level Three testers: -

a. Category 6A Cable Tests

- i. Wire Map
- ii. Length
- iii. Insertion Loss (Attenuation)
- iv. NEXT Loss
- v. PSNEXT Loss
- vi. ELFEXT Loss, pair-to-pair
- vii. PSELFEXT Loss
- viii. Return Loss
- ix. ACR (Attenuation to crosstalk ratio)
- x. PSACR
- xi. Propagation Delay
- xii. Delay Skew

b. Fibre Optic Cable Tests

- i. Link attenuation (insertion loss)
- ii. Length

Any failing link must be diagnosed and corrected. The corrective action shall be followed with a new test to prove that the corrected link meets the performance requirements.

The results should be recorded in one or several measure books showing test results of the cable components. In addition, the measurements must be recorded on two soft copies (CD-ROM).

All components must be tested and a Completion Certificate issued stating the following:

- i. Number of outlets
- ii. Type of cable
- iii. Date completed
- iv. Type of Warranty

In addition, an "as-built" package must be submitted with the following information

- i. Updated floor plans
- ii. Wire/cable routing schematic
- iii. Facility assignment records
- iv. Horizontal cable test results
- v. Fibre Backbone test results

21. CAT 6 PATCH PANELS (AS MOLEX OR APPROVED EQUIVALENT)

The Contractor shall provide factory made CAT 6 patch panels, complete with cable management and front designation strips, 110 PCB mounted connectors and integral RJ mounted jack sockets.

22. FIBER PATCH PANELS (AS MOLEX OR APPROVED EQUIVALENT)

All Backbone Fiber links to individual floors should be terminated on Fiber Patch Panels. Connector interfaces should support LC Connectors .

23. BACK BONE

Backbone cabling inclusive of switches and all necessary accessories shall be carried out in readiness for the termination of edge switches.

The Backbone cabling shall be flexible and allow for easy 'add on's' for future expansions. Hence enough capacity shall be allowed for future expansion.

24. DOCUMENTATION

The contractor shall avail documentation (2 copies) detailing the layout and devices or components of the system and must include all information for maintenance technicians to run, service, extend or maintain the network. In particular, the documentation must be structured and contain the following:

- a. Synopsis of the cabling (primary and secondary)
- b. Charts of the distribution highlighting the details of the elements that have been installed
- c. Detailed map of socket layout (2 Soft copies on CD-ROM should be availed)
- d. Reports on measurements (2 Soft copies on CD-ROM should be availed)

The CD-ROMs provided shall include the software tools required to view, inspect and print any selection of test reports.

25. WARRANTY AND SUPPORT

The Contractor will be required to give a per link warranty of at least fifteen (15) years for the structured cabling infrastructure and must provide a site certification certificate from the manufacturer of the cabling infrastructure not more than 30 days after completion of tests.

In the event of failure of the core switch, the contractor will be required to deliver any necessary parts on the next business day after determining that parts replacement is required, during the standard work week (8 hours a day, 5 days a week). This support will be carried out by a field engineer and will run for a period of **Twelve Months** from the date of commissioning of the LAN.

The contractor will be required to provide a **Twelve Months** warranty on the edge switches from the date of commissioning of the LAN.

26. ADDITIONAL NOTES

Tenderers should take note of the following

- a. The network should be capable of carrying data, voice and video. QoS should be considered as part of installation and configuration of the network.
- b. All active LAN equipment should be from the same manufacturer for seamless integration, management and maintenance.
- c. Each floor should have a telecommunication Closet to house the necessary structured cabling components and active equipment.

BILL No. 1: PRELIMINARIES

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
1.1.01	This is a Firm-Price Contract and the contractor must allow in his tender for the increase in the cost of labour and/or materials during the duration of the contract. No claims will be allowed for increased costs arising from the fluctuations in duties and/or day to day currency fluctuations.	1	Item		
1.1.02	The Contractor shall, when required, provide for approval at no extra cost, samples of all materials to be incorporated in the works. Such samples, when approved, shall be retained by the Engineer and shall form the standard for all such materials incorporated.	1	Item		
1.1.03	The Contractor shall carry out such tests of the Contract Works as required by British Standard Specifications as customary. No testing or commissioning shall be undertaken except in the presence of and to the satisfaction of the Engineer. (Contractor's own preliminary and proving tests exempted).	1	Item		
1.1.04	The Contractor shall allow for Working Drawings as may be necessary. The Working Drawings shall be complete in such detail not only that the Contract Works can be executed on site but also that the Engineer can approve the Contractor's proposals, detailed designs and intentions in the execution of the Contract Works.	1	Item		
1.1.05	The Contractor shall allow for Record Drawings and Maintenance Manual of the installed Contract Works.	1	Item		
1.1.06	Allow for engineers cost for approval of sample fittings, cables and associated work requirements offsite	1	Item		
1.1.07	Allow for profits and attendance for the above-----%	1	Item		
Total Amount Carried Forward to The Summary Page					

BILL No. 2 SCHEDULE 1: STRUCTURED CABLING

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
	<i>Supply, Install, Test and Commission as per BS 7671:2008 the following as described below:</i>				
	HORIZONTAL CABLING				
2.1.01	RJ45 CAT 6A STP Face Plates as described in the Particular Specifications.	48	No.		
2.1.02	3M RJ45- RJ45 CAT 6A STP Factory Terminated Patch Cord as as described in the Particular Specifications.	48	No.		
2.1.03	1M RJ45- RJ45 CAT 6A STP Factory Terminated Patch Cord as as described in the Particular Specifications.	48	No.		
2.1.04	CAT 6A STP Cable as as described in the Particular Specifications pulled between Items 2.1.01 and 2.1.06.	1920	No.		
	CABINETS				
2.1.05	18U Network Cabinet as described in the Particular Specifications.	2	No.		
2.1.06	CAT 6A Patch Panel as described in the Particular Specifications.	2	No.		
2.1.07	Fibre Optic Patch Panel as described in the Particular Specifications.	2	No.		
2.1.08	Cable Manager as described in the Particular Specifications.	2	No.		
2.1.09	Floor UPS as described in the Particular Specifications.	2	No.		
	ACTIVE COMPONENTS				
2.1.10	Floor Switch as described in the Particular Specifications.	2	No.		
2.1.11	Wireless Access Point as described in the Particular Specifications.	12	No.		
	BACKBONE CABLING				
2.1.12	8 Core Multimode Fibre Optic Cable pulled between Item 2.1.07 and the Core Switch.	100	LM.		
2.1.13	LC-LC Fibre Patch Cable between Item 2.1.07 and Item 2.1.10.	2	No.		
	Total Amount For 1 No. Typical Floor				
	Total Amount For 2 No. Typical Floors (x2)				
	Total Amount Carried Forward to Summary Page				

BILL No. 2 SCHEDULE 2: CCTV PERIMETER

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
	<i>Supply, Install, Test and Commission as per BS 7671:2008 the following as described below:</i>				
2.2.01	PTZ Camera as described in the Particular Specifications.	13	No.		
2.2.02	12U Network Cabinet as described in the Particular Specifications.	1	No.		
2.2.03	Floor Switch as described in the Particular Specifications.	1	No.		
2.2.04	CAT 6A Patch Panel as described in the Particular Specifications.	1	No.		
2.2.05	Fibre Optic Patch Panel as described in the Particular Specifications.	1	No.		
2.2.06	Cable Manager as described in the Particular Specifications.	1	No.		
2.2.07	UPS as described in the Particular Specifications.	1	No.		
2.2.08	CAT 6A Outdoor Cable pulled between the Items 2.2.01 and Item 2.2.04 .	520	LM		
2.2.09	CAT 6A Patch Cable pulled between Item 2.2.04 and Item 2.2.03	24	No.		
2.2.10	8 Core Multimode Fibre Optic Cable pulled between Item 2.2.05 & Core Switch .	200	LM.		
2.2.11	LC-LC Fibre Patch Cable between Item 2.2.03 and Item 2.2.05 .	1	No.		
2.2.12	PIR Detector as described in the Particular Specifications.	16	No.		
2.2.13	Mounting Pole for Item 2.2.01 and Item 2.2.12 as described in the Particular Specifications.	29	No.		
Total Amount Carried Forward to Summary Page					

BILL No. 2 SCHEDULE 3: CCTV BUILDING

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
	<i>Supply, Install, Test and Commission as per BS 7671:2008 the following as described below:</i>				
2.3.01	PTZ Camera as described in the Particular Specifications.				
	i) Dome Camera as described in the Particular Specifications.	10	No.		
	ii) Bullet Camera as described in the Particular Specifications.	1	No.		
2.3.02	12U Network Cabinet as described in the Particular Specifications.	3	No.		
2.3.03	Floor Switch as described in the Particular Specifications.	3	No.		
2.3.04	CAT 6A Patch Panel as described in the Particular Specifications.	3	No.		
2.3.05	Fibre Optic Patch Panel as described in the Particular Specifications.	3	No.		
2.3.06	Cable Manager as described in the Particular Specifications.	3	No.		
2.3.07	UPS as described in the Particular Specifications.	3	No.		
2.3.08	CAT 6A Indoor Cable pulled between the Items 2.3.01 and Item 2.3.04 .	990	LM		
2.3.09	CAT 6A Patch Cable pulled between Item 2.3.04 and Item 2.3.03	72	No.		
2.3.10	8 Core Multimode Fibre Optic Cable pulled between Item 2.3.05 & Core Switch .	360	LM.		
2.3.11	LC-LC Fibre Patch Cable between Item 2.3.03 and Item 2.3.05 .	3	No.		
Total Amount Carried Forward to Summary Page					

BILL No. 2 SCHEDULE NO. 4: SERVER ROOM

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
	<i>Supply, Install, Test and Commission as per BS 7671:2008 the following as described below:</i>				
2.4.01	Dome Camera as described in the Particular Specifications.	1	No.		
2.4.02	42U Network Cabinet as described in the Particular Specifications.	1	No.		
2.4.03	Floor Switch as described in the Particular Specifications.	1	No.		
2.4.04	Core Switch as described in the Particular Specifications.	1	No.		
2.4.05	CAT 6A Patch Panel as described in the Particular Specifications.	1	No.		
2.4.06	Fibre Optic Patch Panel as described in the Particular Specifications.	2	No.		
2.4.07	Cable Manager as described in the Particular Specifications.	2	No.		
2.4.08	UPS as described in the Particular Specifications.	1	No.		
2.4.09	CAT 6A Cable pulled between Items 2.4.01, 2.4.13, 2.4.15 and Item 2.4.05.	1	LM		
2.4.10	CAT 6A Patch Cable pulled between Item 2.4.05 and Item 2.4.03	24	No.		
2.4.11	8 Core Multimode Fibre Optic Cable pulled between Items 2.4.03 and 2.4.06.	10	LM.		
2.4.12	LC-LC Fibre Patch Cable between Item 2.4.04 and Item 2.4.06.	24	No.		
2.4.13	Video Management Server as described in the Particular Specifications.	1	No.		
2.4.14	Network Video Recorder Type 1 as described in the Particular Specifications.	1	No.		
2.4.15	Network Video Recorder Type 2 as described in the Particular Specifications.	1	No.		
2.4.16	Video Wall as described in the Particular Specifications.	1	No.		
2.4.17	Keyboard Drawer & Mouse as described in the Particular Specifications.	1	No.		
2.4.18	Display Monitor as described in the Particular Specifications.	2	No.		
Total Amount Carried Forward to Summary Page					

BILL No. 2 SCHEDULE NO. 5: GATE ACCESS CONTROL

Item	Description	Qty	Unit	Rate (USD)	Amount (USD)
	<i>Supply,Install,Test and Commission as per BS 7671:2008 the following as described below:</i>				
2.5.01	Rising Bollard as described in the Particular Specifications.	8	No.		
2.5.02	Control Panel for Item 2.5.01 as described in the Particular Specifications.	1	No.		
2.5.03	Control Keyboard for Item 2.5.01 as described in the Particular Specifications.	2	No.		
2.5.04	Traffic Lights as described in the Particular Specifications.	2	No.		
2.5.05	Flash Warning Light as described in the Particular Specifications.	2	No.		
2.5.06	Photocell TX/RX Pair as described in the Particular Specifications.	2	No.		
2.5.07	50 mm Dia. PVC Drain Pipe for Item 2.5.01.	1	Item		
2.5.08	Excavate, Reinforce, Concrete in > C30 Class, Backfill & Reinstall Surface to	1	Item		
2.5.09	Power & Control Cabling to Manufacturer's Specification.	1	Item		
2.5.10	Walkthrough Metal Detector as described in the Particular Specifications.	1	No.		
2.5.11	XRAY- Baggage Scanner as described in the Particular Specifications.	1	Item		
Total Amount Carried Forward to Summary Page					

MAIN SUMMARY PAGE

ItemNo.	Description	Amount(USD)
1.00	Bill No. 1 Preliminaries and General Conditions	
2.00	Bill No. 2 Schedule No. 1 Structured Cabling	
3.00	Bill No. 2 Schedule No. 2 CCTV & Access Control Perimeter	
4.00	Bill No. 2 Schedule No. 3 CCTV Building	
5.00	Bill No. 2 Schedule No. 4 Server Room	
6.00	Bill No. 2 Schedule No. 5 Gate Access Control	
	Total Amount for Structured Cabling Installations	

AMOUNT IN WORDS

USD

.....

Bidder's Official Stamp

P.O. Box.....

Signature.....

PIN.....VAT.....

PROVISIONAL SUMS

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

[illegible]

GRAND SUMMARY

PROPOSED REFURBISHMENT WORKS TO KENYA EMBASSY IN ADDIS ABABA - ETHIOPIA

ITEM	DESCRIPTION	PAGE	FOR TENDERER USE ONLY	FOR OFFICIAL USE ONLY
	<u>GRAND SUMMARY</u>		(USD.)	(USD.)
1	PRELIMINARIES	P/1		
2	CHANCERY	AAE/CH/17		
3	OUT DOOR KITCHEN	AAE/K/15		
4	AMBASSADOR'S RESIDENCE	AAE/AR/10		
5	STAFF RESIDENCES	AAE/SR/4		
6	CIVIL WORKS	CIV/5		
7	ELECTRICAL INSTALLATION WORKS	ELEC-45		
8	STRUCTURED CABLING, CCTV & ACCESS CONTROL INSTALLATION WORKS	STRUCT-8		
9	PROVISIONAL SUMS	PS/1		
	GRAND TOTAL CARRIED TO FORM OF TENDER (ALL TAXES INCLUSIVE)			

Amount in Words; US Dollars

.....

.....**Cents**.....

Tenderer's Name

Tenderer's Signature & Stamp

Address

.....

Date

Witness's Name

Witness's Signature & Stamp

Address

.....

Date